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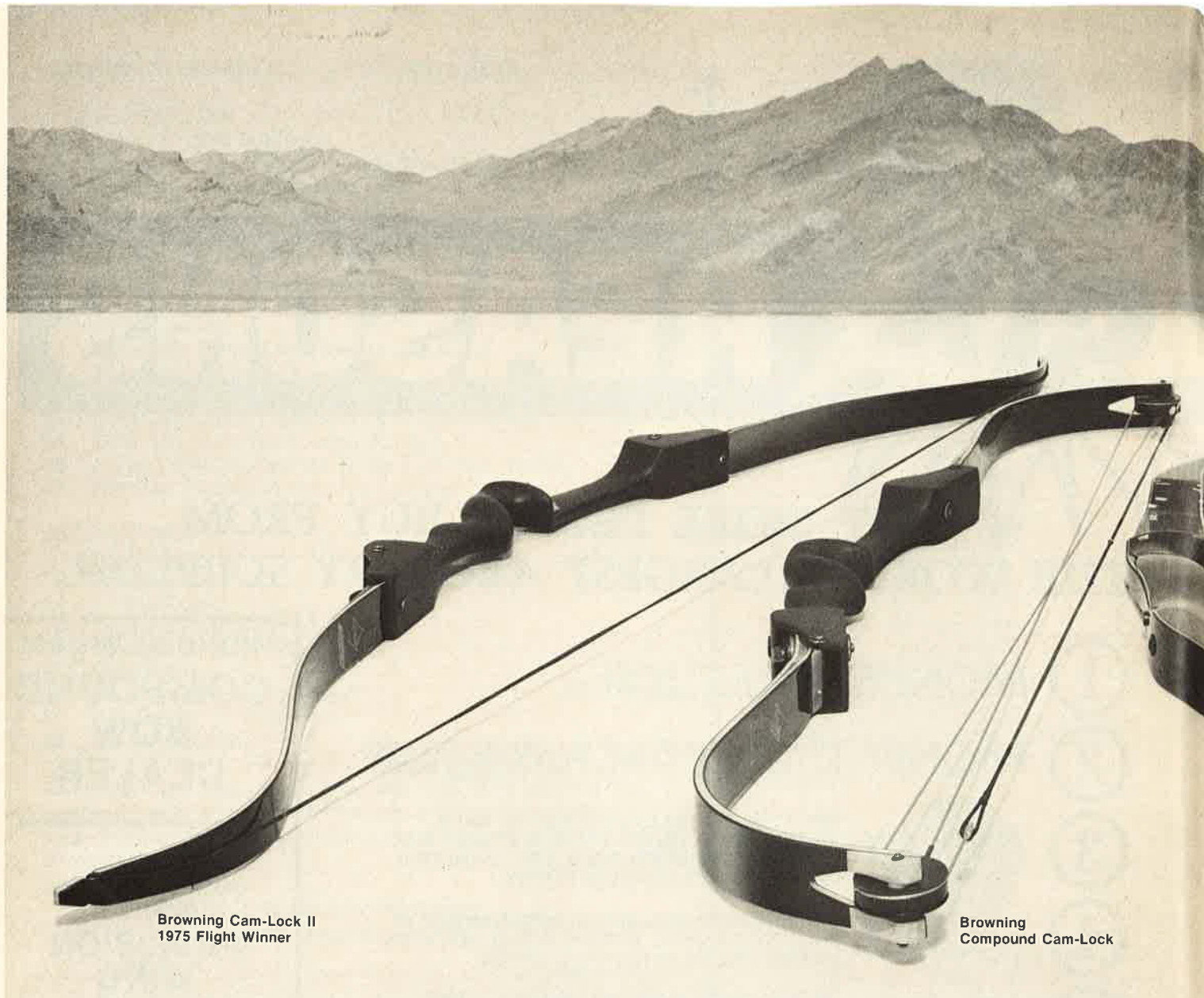
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| COMPOUND BOWS | | RECURVE BOWS |
| Broadhead Flight—Compound Bows limited to 80 lbs. peak draw. (Arrows used were 450 grain with hunting broadhead) | | |
| Amateur Men | | |
| 1st | 405 yds. 2 ft. 10 in. | Browning Prototype Compound |
| 2nd | 400 yds. 2 ft. 10 in. | Browning Compound Stalker II |
| 3rd | 333 yds. 1 ft. 11 in. | Pickering (Ramco) |
| Professional Men | | |
| 1st | 399 yds. 2 ft. 4 in. | Browning Prototype Compound |
| 2nd | 371 yds. 8 in. | Bear |
| 3rd | 342 yds. 11 in. | Pickering (Ramco) |
| Regular Flight—Compound Hunting Bows—Unlimited Weight. (Arrows used were special short, light arrows) | | |
| 1st | 720 yds. 2 in. | Browning Compound Stalker II |
| 2nd | 670 yds. 2 in. | Bear |
| Broadhead Flight—Conventional Recurve—Unlimited Weight. (450 grain arrows with hunting broadhead) | | |
| Amateur Men | | |
| 1st | 416 yds. 6 in. | Browning Cam-Lock II |
| 2nd | 349 yds. 1 ft. 4 in. | Pickering (Ramco) |
| Professional Men | | |
| 1st | 398 yds. 1 ft. 4 in. | Browning Cam-Lock II |
| 2nd | 365 yds. 2 ft. 11 in. | Bear |
| 3rd | 314 yds. 1 ft. 8 in. | Ramco |
| Regular Flight—Conventional Recurve Bows—Unlimited Weight. (Special short, light arrows) | | |
| 1st | 744 yds. 2 ft. 5 in. | Browning Cam-Lock II |
| 2nd | 619 yds. 10 in. | Bear |

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Archery World welcomes your comments on any topic relative to archery and bowhunting. Address your letters to Write On, Archery World, 534 N. Broadway, Milwaukee, Wis. 53202.

SEEKS TAPERING TOOL

I am trying to purchase an Eastern or other brand five-degree tapering tool that can be motorized. I have contacted a good number of archery dealers thus far without success. If anyone has any idea where I may obtain this tool I would appreciate hearing from them.

George Thompson
3058 W. Sherwood
Roseburg, Ore. 97470

LOOKING FOR HILL'S BOOK

Would you be able to tell me where I can get a copy of *Hunting the Hard Way* by Howard Hill?

Lester R. Purdy
Harrison, N.Y.

• Nicklas & Parker, 24 Lake St., Cooperstown, N.Y. 13326 may have a copy of Howard Hill's *HUNTING THE HARD WAY*. They deal in out-of-print archery books.

LET'S SAVE OUR SPORT

Many non-hunters who enjoy the outdoors as much as we sportsmen do, see only the damage that is done by the minority of thoughtless and/or uneducated people who hunt. Such damage includes livestock mistaken for game, dead game never recovered and damaged buildings and fences.

This minority is one of the key legs that the anti-hunting forces have to stand on. We must break this leg now, not a few years from now when the anti-hunting groups win and our privilege to hunt is gone.

The best way to break this leg is for sportsmen to band together, just as anti-hunters have banded together and change the general public's misconception of hunting.

We must have a two-point plan that educates all hunters in the principles of hunting and tracking and that informs the public of how hunting benefits both people and wildlife.

Remember, we are the true game protectors. If we are defeated, we, along with our wildlife, shall pay the penalty.

Mark A. Salsgiver
Ford City, Pa.

ENJOYED ROY CASE STORY

I enjoyed your article on Roy Case, Wisconsin's number one bowhunter, very much and would like to see more articles about Wisconsin bowhunters and their hunting stories. Also, my hat is off to Roy Case for his contribution in getting archery started in the upper midwest states and in making Wisconsin archery and bows what they are today.

Linc Peterson
Green Bay, Wis.

DON'T HELP ANTI-HUNTERS

I have subscribed to your magazine for a year and am well pleased by the material and advice I find in it.

However, I recently found an advertising statement that disturbed me greatly because it mentioned a fallacy that all bowhunters know is exactly that, yet anti-hunters keep claiming they've heard of—that of several arrows being in one animal at once.

I feel that to protect our right to hunt, advertisers and editors must prevent potentially derogatory or misinterpreted statements from being made.

Randy Willmann
Hartford City, Ind.

THANKS FOR "WHAT HUNTERS CAN DO"

. . . thank you for the editorial entitled, "What Hunters Can Do". There are many readers like myself who want to get involved but don't know how.

With the information included in your article I at least now know where to start in fighting the anti-hunting movement. . . . Why not print names and addresses of these organizations every month?

Fred Murray
Bon Air, Va.

• We may not be able to print them every month, but you'll note they're included in "The Hunters Story, No. 2" our poster on pages 44-45 of this issue. You can tear out and save the poster, so the addresses will always be handy.

AGAINST SHOOTING COMPETENCY REQUIREMENT

About your January article on the NFAA Bowhunter Education Program. I'll be damned if I'm going to sit idle and let some tournament archer tell me how to hunt and if I don't do it their way, not be able to obtain my bowhunting license.

The all-new
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from Indian Archery —

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- Continuous black nylon-coated, steel cable assembly, with center serving, eliminates string breakage and cable problems.
- Sight window cut 5/16" past center allows full cable clearance and true center shot.

FEATURES/SPECIFICATIONS — MODEL 222

- Hunter's Black poly-molded, steel and fiberglass strengthened handle with contoured grip. Matched black Glassflex® limbs. Right-hand only.
- Draw weight 50 lb. with 50% drop-off to 25 lb. at 30 in. draw. Draw limit 30 1/2 in.
- Continuous black nylon-coated steel cable assembly with center serving.
- Length: Axle-to-axle — 38 in.; overall — 42 in. • Weight 4 lb.
- Pro-type nylon arrow rest. • Threaded insert accepts standard accessories.
- Personalized monogram kit.

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- Draw weight 50 lb. with 50% drop-off to 25 lb. at 30 in. draw. Draw limit 30½ in.
- Continuous black nylon-coated steel cable assembly with center serving.
- Length: Axle-to-axle — 38 in.; overall — 42 in. • Weight 3 lb. 10 oz.
- Pro-type nylon arrow rest. • Threaded insert accepts standard accessories.
- Personalized monogram kit.

The Golden Comanche 50/25 — available with either Glassflex® or laminated limbs. Great compound hunting bows at very modest prices. See them at your local sporting goods dealer.

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They state that a shooting competency qualification is not required. My feeling is that if . . . this gets started . . . you can bet before too long the competency test will become MANDATORY to obtain a bowhunting license.

This program could be perfect if two items were eliminated; requiring a course in order to obtain a bowhunting license and the shooting competency qualification.

Steve W.
A Pennsylvania Bowhunter
(name withheld by request)

RESPONSE TO "GROWING PAINS"

In the article entitled, "The Growing Pains of Competitive Archery" the apparent antagonism developed between Mr. Williams and Miss Pszczola seems to have surfaced numerous complex and ambiguous problems . . .

For instance, the PAA rules, which state that an apprentice member has no rights whatsoever, either to defend his actions or be told of the reasons behind PAA decisions appear totally unjust and reflect an almost totalitarian order. Initiation regulations which discriminate against apprentice members I feel are unconstitutional and suggest an outmoded feudal system.

The other major issue brought up involved Olympic qualifier rules in which discriminating decisions can be made upon who participates or attends a tournament, which I feel should be left up to the NAA members themselves.

Jealousy is obviously at the root of the major matter, but I believe what basically caused this jealousy is inherent in the question: Does a student, knowledgeable in a particular area,

have the right to question the methods and manner of instruction of a coach? . . . I believe so. A teacher must be open-minded enough to take criticism in an objective manner . . . if criticism is taken in a personal light, tension and trauma will result . . . You also may get the use of authoritarian force . . . to sway an issue which is entirely personal and should not be outside the boundaries of the school.

Frank W. Chang
University of Pennsylvania
Philadelphia, Pa.

In my opinion your article, "Growing Pains of Competitive Archery," is the most vicious and one-sided example of cheap, yellow and sensational journalism I have ever read . . . I feel that your story was loaded with vicious gossip, innuendoes, lies and malicious rumors, designed to crucify a wonderful and honorable woman. WHAT WAS YOUR PURPOSE?

At the banquet, when Miss Pszczola was given a standing ovation this group *sat with arms folded*.

If you do not print an apology in your next issue I will cancel my subscription and urge all my team members and friends to do the same.

Joan Schutz
Archery Coach, Cerritos College
Norwalk, Cal.

While I admittedly know nothing about tournament rules and politics (I'm a bowhunter), it seems to me that no one concerned, including top officials, acted in a manner beneficial

(continued on page 81)

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In this well-edited collection of articles . . . the reader will find a thorough introduction to bowhunting, as well as some first-person accounts of bow-hunting adventures . . . the first chapter is devoted to hunting ethics; and a sensitivity, with few exceptions, is shown toward both humane and ecological issues. In sum, this is a fine way to either begin or add to a bowhunting collection [for the most part, general archery titles will not suffice]. A sound, basic book.

Library Journal review



This common-sense book is a "must" for every bowhunter's collection. For beginners and advanced hunters, Archery World editor Glenn Helgeland and the nation's foremost bowhunting experts offer useful insights and tips on all phases of the sport. How to select and use the right equipment. How to practice for best hunting success. Hunting techniques. How to hunt whitetail deer, mule deer, elk, bear, antelope, varmints, small game, birds. Bowfishing. Caring for your trophies. The future of your sport. And a lot more.

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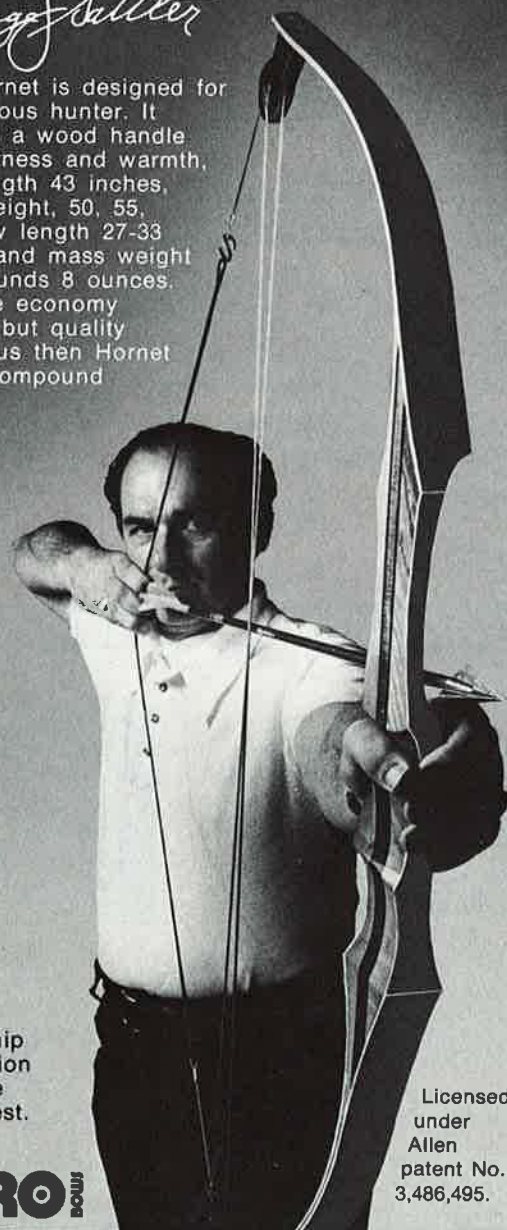
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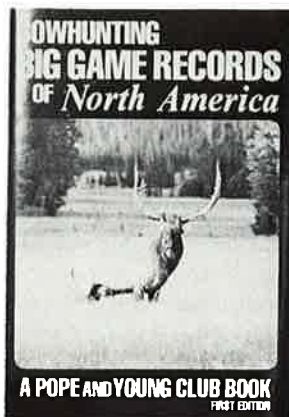
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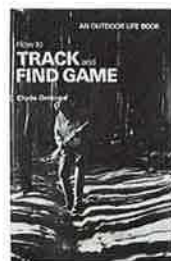
This is **THE** record book for bowhunters. The book's six parts are: The Pope and Young Club, giving the history of the club's formation, biographies of Saxton Pope and Art Young, a biography of Ishi and an explanation of the Ishi Award; natural histories and "how to hunt" information about all species of North American big game; listing of all records and qualifying heads in each entry class; brief recountings of the hunts behind the records; a chapter on bowhunting technique, and a listing of official measurers, official scoring forms and photos of trophy rooms. Photos of most of the world record heads are shown with the listings.

In sum, the book covers the romance of bowhunting, and "how to," and what some bowhunters have done. An excellent fireside book, and useful when checking to see which regions produce trophy animals.

Hardbound, 8-5/8 by 5-3/4 inches, 307 pages, \$17.50. Available on the Archery World Bookshelf, page 73.

HOW TO TRACK AND FIND BIG GAME

by Clyde Ormond



This book explains how to locate the 39 major North American game animals by relating their tracks and other sign to the ways the animals behave in all situations. Major sections cover big game, small game and predators. It's liberally illustrated with black-and-white drawings.

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This book helps advance that fascination. **Hardbound, 9-3/8 by 6-1/4 inches, 152 pages, \$7.50.** Available on the Archery World Bookshelf, page 73.

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tackle topics

To have your technical questions answered, send them either to Len Cardinale, Butts & Bows Archery, 468 Washington Ave., Belleville, N. J. 07109 or Norb Mullaney, Director of Bow Testing, c/o Archery World, 534 N. Broadway, Milwaukee, Wis. 53202.

HOW TO SELECT A BOW AND ARROWS

I am 14 years old and would like to know what pound bow I should purchase and what size arrows I should use. I already have a 25-pound Ben Pearson.

Howard Day
 Memphis, Tenn.

• Without knowing several other factors, it's impossible to recommend a weight. But here are some things you'll need to keep in mind when you go shopping: How big are you?; how fast are you growing?; what is your draw length?; what will you use the bow for? If you're looking for a hunting bow, look for no less than a 40-pound bow; you may be able to handle a 45-pound bow if you're strong enough. If you'll be doing outdoor target shooting, check out the 35-pound bows, or more if you can handle it. For indoor shooting, your 25-pound bow would be alright.

Best thing to do would be to go to a pro shop in your area and have the archery specialist help you find a bow that is of heavy enough draw weight to perform what's expected of it and which you can shoot comfortably. Then he will help you match the proper size arrow shaft to your draw weight at your draw length.

You probably have cash problems, if you're like the rest of us, so it may be wise to look at used bows. Especially since you're probably still growing and may grow out of a bow in a year or so.

ADAPTER THREAD STANDARDS

I want to shoot the new Satellite broadhead. Will the threads fit the broadhead adapters that I can obtain from Bingham Archery? Are the thread sizes the same?

Ed Hayter
 Pratt, Ks.

• Yes, they will fit. All screw-in systems manufactured today are based on 8/32 thread sizes, so there is complete interchangeability. In fact, at times it seems as if this is one of the few aspects that are completely standardized. So there is no sweat; you can buy the inserts from any company without worry.

FLETCHING STYLES

My friend has purchased a fletching jig with straight and helical clamps. He read somewhere that the straight clamp should be used when fletching arrows for a compound bow to get best results and that helical fletching should be used on recurves for best performance. Is this right?

Also, I have some arrows fletched straight with a slight degree offset. Will they give better performance than a helical clamp?

Ray Parris, Jr.
 Washingtonville, N.Y.

• On a compound bow, if you're shooting target arrows you can get good performance with straight fletching, especially if you're using a release. This style will allow a faster arrow because there is less drag. However, on hunting arrows you would be wise to have some amount of offset for added spin stabilizing and drag stabilizing of the shaft with that big broadhead on the tip. The broadhead must not be allowed to steer the arrow.

Helical fletches are more often used on the recurve system, but there's no law demanding that they be the only style used. They give the fastest arrow stabilization, but they also create the most drag and slow down the arrow the most. Helical fletching can be used on compounds, but some people have trouble getting cable clearance.

If you have your hunting tackle tuned well enough, with arrows properly spined, you should get faster arrows that have straight fletches attached with an offset of a couple of degrees. But if you need to depend on something to stabilize your arrows most quickly or to overcome some other problem of arrow flight, the helical fletch will most likely work best.

CUSHION PLUNGERS FOR HUNTING?

Some people don't recommend cushion plungers on hunting bows because they say dust, cold temperatures, etc. cause them to malfunction. Comments please.

Don Darnell
 Hays, Ks.

• From Norb Mullaney: "I have not experienced any dust or cold temperature problems [Wisconsin hunting] with my cushion plungers, although I have heard that metal-bodied plungers can become sticky when dirty. I can also visualize a grease-type lubricant becoming stiff in extreme cold. One remedy for this is to use a Teflon or Delrin plunger [the entire body, not just the cap] and lubricate only with a light oil. However, I experienced cold flow [bending and permanent set] with a Teflon plunger. I solved this problem by drilling from the back side with a 1/16" diameter drill to within about 1/8" of the arrow-end of

the plunger and then pressing in a suitable length of 1/16" diameter music wire. If you drill with a single pass, the Teflon will expand a tiny bit as you drill and the resulting hole will be slightly undersize. This will give a slight press fit on the wire and hold it in place. The Teflon plunger I treated this way has remained straight ever since.

"A light oil used with the plastic plunger will be all the lubrication needed. If conditions are too dusty, it can be wiped dry and will still function with its own natural lubricity.

"You could also mount your arrow rest on an adjustable arrow plate; however, the cushion plunger is more forgiving than that system."

SHOOTING THE RIGHT ARROWS?

I shoot a 40-pound, 58-inch Red Wing Hunter using Game Getter 2016 arrows. I seem to be bending and replacing arrows all the time. Is it because I hit too many hard things? I shot a rabbit and he bent my arrow so that now I can't even shoot it. Some arrows I can straighten, but others are goners. Should I go to fiberglass? Where can I get a good set of arrows at reasonable cost?

Steve Webb
 Humboldt, Iowa

• Aluminum arrows can get to be an expensive proposition for small game hunting. You would be better off with

fiberglass or wood. Both are cheaper than aluminum. Fiberglass is relatively flexible so it won't bend like aluminum, and wood arrows are cheaper to replace. It's impossible to say what size shaft you should be using because you didn't give your draw length. But if 2016s are flying right from your bow, try #8 or #9 glass.

ARROW QUESTIONS

Is it possible to use regular hunting and target plastic vane fletching on bowfishing arrows? Or does it have to be rubber fletching? What type of arrow shaft is recommended for bowfishing?

I have a 41-pound, 60-inch bow, and I draw 30 inches. Does it matter what arrow size I use? If so, what size should I try first? What do the numbers of the four-digit aluminum arrow numbering system mean, ie, 2020, etc.?

Ted Lail
 Vancouver, Wash.

• Best arrow shaft for bowfishing is solid fiberglass. Most such arrows come with a slip-on rubber fletching. It may be possible to use regular plastic fletching on bowfishing arrows, but it would be impractical and a lot of needless hassle attaching them. A lot of people remove the rubber fletching and shoot the arrow without any fletching. The attached fish line tends to act as a drag stabilization, and most shots are so

short that fletching often is inconsequential.

Yes, it definitely matters which size arrows you use for other archery shooting, but not bowfishing. The solid fiberglass fish arrows are so heavy and stiff that you can ignore matching systems when using them. But for other archery shooting, to match the right arrow to your draw weight at your draw length, try a 2016 or 2114 aluminum arrow shaft or #9 or #10 glass shaft. With a 30-inch draw, you're getting approximately 46 pounds from your bow at full draw [add 2.5 pounds for every inch of draw beyond 28 inches], so these shaft sizes would be good starting points to determine proper matching.

On the four-digit numbering system for aluminum shafts, the first two digits are the outside diameter of the shaft in 64ths of an inch and the last two digits are the shaft wall thickness in 1000ths of an inch.

POD INFO

Where can I get information regarding the pod?

Dennis Burkett
 (no address)

• Write to Dr. R.P. Herrington, 615 W. Capitol St., Jackson, Mississippi. Remember, the pod can be used only in Mississippi and is illegal in the other 49 states.

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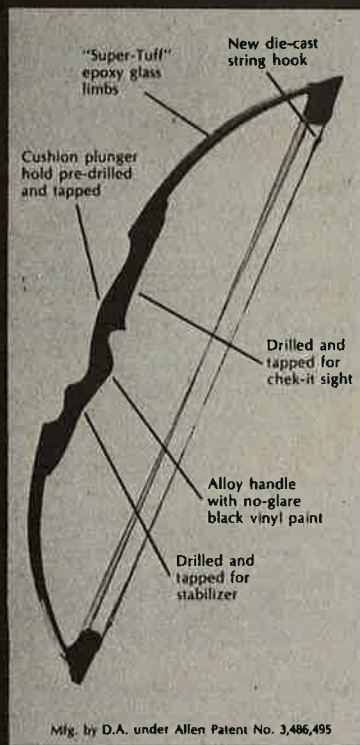
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ARCHERY WORLD 1975 INDEX

Here's how it works: Boots would be found in the November issue, page 55. Clothing would be September, page 82, and November, pages 73 and 77. Graden West prepared this index because, he felt it would save shuffling through past issues looking for something you'd seen, but couldn't remember where.

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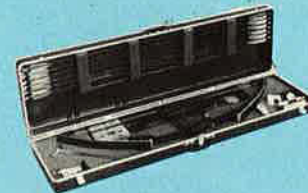
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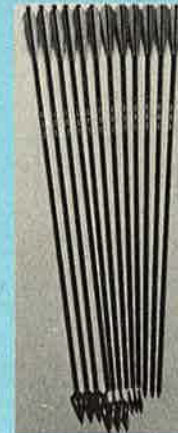
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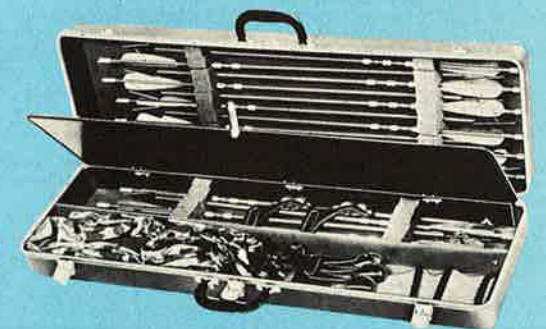
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This page is designed to help you, the bowhunter and/or target or field archer, conveniently obtain product information about a host of archery items. Most material is free; some items have a small charge.

Simply circle the appropriate numbers on the bottom of the bound-in card which faces this page. If there is a cost for one or more of the printed items you want, please enclose payment with your card. Make checks or money orders payable to each company offering the item you want. If no payment is necessary for items you selected, just affix a 9-cent stamp to the card and drop it in the mail. We will forward your requests to the proper agencies for fulfillment.

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1. Free Brochure and order blank on Port Orford Cedar arrow shafts with "Penna-Seal" from **Acme Wood Products**.

2. Free catalogs and price list of a variety of bow case sizes and styles from the **Allen Company**.

3. Free discount catalog from the world's largest supplier of top name archery brands from **Anderson Archery**.

4. **The Archery Outfitters** offers a free catalog of their complete line of archery supplies and equipment.

5. **Astro Bows** will send you a free brochure on their complete line of compound hunting and target bows.

6. **Astrosystems Incorporated** will send you a technical description about their revolutionary Reflex Bow Sight.

7. **Baker Manufacturing** has a free brochure on their new ProHunter, the world's largest tree stand, their new Add On Seat, and all their other tree stand products.

8. **Bear Archery** will send you free their new 1976 catalog featuring the Fred Bear Tree Stand and Polar II compound bow, plus a brochure on their Alaskan and Tamerlane II compound bows.

9. **Bingham Archery** has a fully illustrated catalog describing semi-finished bows, plus arrows and shafts, and archery accessories. \$1.00

10. **Henry A. Bitzenburger Co.** will send you free information on the new Bitzenburger Nock Receiver for compound-arrow fletching.

11. **Bohning Adhesives Co. Ltd.** will send you complete details on all their chemical products for archery.

12. **Bowhunter's Discount Warehouse** will send you their 1976 catalog featuring their complete line of archery supplies at low competitive prices. \$1.00. Free to dealers.

13. **Browning's** catalog has 112 pages covering Browning's compound bows, recurve bows, arrows, archery accessories, boots, clothing and guns, plus expert archery tips. Free.

14. **C & D Archery** will send you free literature on their Ramses Warrior compound bow, their bow quiver, springy rest, hunting sight, and other archery accessories.

15. **Calmont Compound Archery Targets** has free literature on their specially-made targets.

16. **Carroll's Archery** has free bro-

chures and other literature on their complete line of archery equipment.

17. **Colorado Northwestern Community College** will send you free information about their archery scholarship program.

18. **Copperhead Mfg. Corp.** will send you free literature about the Black Copperhead Magnum, the finest precision broadhead ever made.

19. **Cupid Archery**, manufacturers and distributors of archery equipment in Canada, offers a free catalog of their archery line.

20. **F/S Arrows** will send you free, a catalog of their merchandise.

21. **Feline** will send you a catalog showing all major tackle and accessories. \$2.00, refunded with first order.

22. **Gazzara Mfg. Co.** has free descriptive literature and an instruction sheet for their positive center release.

23. Send **50 cents** for a 1976 full discount price list for arrows, arrow components, compound bows and selected accessories from **Golden Arrow Archery Lanes**.

24. **Gordon Plastics** has free information on their Glashafts, "Botuff", and their new Carbon Glas material.

25. **Herter's** big catalog covers all equipment an archer needs, plus hunting, camping, fishing supplies and more. \$1.00 refunded with first order.

26. **Hobby Haven** has a free instruction sheet for their shooting release.

27. **Hunter's International Mfg. Corp.** will send you a free brochure and chart explaining the advantages of stainless steel arrow shafts.

28. **Indian Archery** will send you a free catalog covering their complete line of compound bows, including the all-new Golden Comanche, and full information about all their archery accessories.

29. **JC Manufacturing** will provide a free price list and other information on theirnock points.

30. **Jennings Compound Bow, Inc.** has free information on all their compound bows and accessories.

31. **Jet Aer** has a free brochure on their complete line of sportsman's knives and deer lure.

32. **Kwikee Kwiver** has a catalog sheet available to distributors.

33. New "76" brochure, including the Kodiak Skinner, is available from **LOF Custom Knives**. \$1.00

34. **Martin Archery** will send you a full color bow brochure featuring their MT-3 Ocelot and Cougar II compounds.

35. **The Don Moss** broadhead sharpener is described in a brochure, available at no cost.

36. Flipper Rest attachment and use information is available free from **New Archery Products**.

37. **Nirk Archery** has free information on all their products.

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39. Consistent quality with diamond polish cedar arrows only at **Norway Archery**. Free brochure.

40. **Old Master Crafters** has a complete price list of their raw materials for use in building your own bow, free.

41. **Ben Pearson** will send you a free catalog on their full line of archery products.

42. The Ambusher tree stand which eliminates tree climbing has a free brochure and other info from manufacturer **W.C. Phillips**.

43. Free eight-page Glas-lite archery catalog, plus information on their new Switch-A-Head arrow system is available from **Plas/Steel Products**.

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45. **Quality Leathercraft Co.** has a fully illustrated catalog of complete line DeLuxe Quivers and leather archery accessories, free.

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47. **Reynolds Archery Products**, manufacturers of quality bow sights and related archery products has free literature on all their products. Manufacturing capabilities and price lists available to dealers.

48. **Robin Hood** authorized dealers offer the finest in archery pro shop

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49. Get a free brochure on Port Orford Cedar Shafts and price list from **Rose City Archery, Inc.**

50. **Saunders** offers a free 20-page booklet, "How to Have a Successful Bow Hunt." Covers hunting tips, bow tuning, safety, equipment care, broadhead sharpening tips and more.

51. **Savora Archery** will send you information about their Super-S broadhead.

52. Free catalog of hunting and tournament equipment, also describing special club discount plan, is available from **Southeastern Archery**.

53. **Sportronics** has free descriptive literature on history, manufacture and prices of their lighted sight pins.

54. **Mel Stanislawski** will send you a free flyer describing the smooth, triggerless pivot action of the new Stanislawski II Release.

55. **Stemmler Archery** offers a free catalog covering their new hunting bows and related items.

56. **Sweetland Products** has a free brochure on screw-in adaptors, arrow points, fish points, fur tracers and other items.

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58. You can get free literature describing their new target and hunting sights from **Toxonics**.

59. **Ultra Products, Ltd.** now has a larger, second edition of their "Spirit of '76" catalog available. Includes more hunting and target product information. 50 cents

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61. **Western Archery Sales** has information about their Rain-Bow hunting sight.

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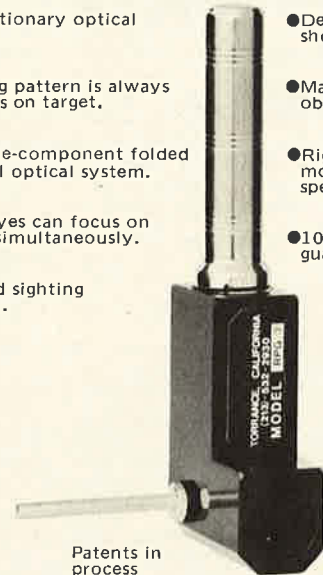
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MAKE THIS BUCKET BOW REEL

by Robert Brashear

LAST SUMMER, the federal ecology changers were draining wetland in my stompin' grounds. The low water level was putting bull carp in the twenty-pound class within reach of any bowfishing arrow. Since no bow reel could be found in my locale to replace the one that a gar had borrowed earlier in the summer, I ordered a new shoot-through model. At twelve dollars, it was hard to send the order; but I wanted one of those big goldfish.

Two weeks later I got the response that I am used to when I want something in a hurry—"On back order. Please reorder in ten days." Like most bowmen in my predicament, I was mad and felt sorry for myself.

I decided to take my anger out on the plastic bucket that I was sitting on, so a swift kick sent it sailing. Someone up above likes fishermen, for the bucket lodged against the tree limb and I promptly saw my shoot-thru bow reel just waiting to be cut out.

This plastic bucket had been purchased from a local restaurant for the meager sum of seventy-five cents. It was a five gallon pickle canister with a snap on lid. The lip that held the lid on would be the restraint to keep the monofilament from bird-nesting off the spool.

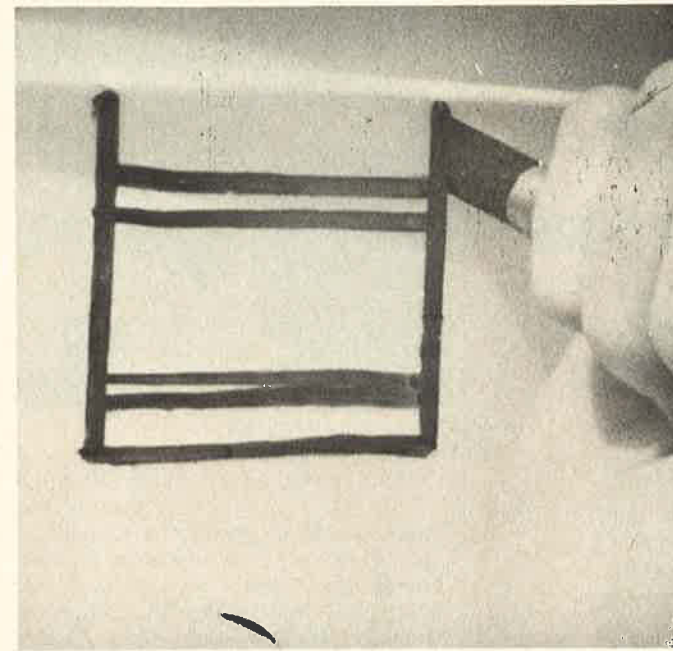
Only the top portion of the bucket is used, with the exception of two ears that can be cut as long or as short as you desire. The plastic material can be cut with any type of hand saw with little or no difficulty.

The earflaps that will be used for connecting the reel to the bow should be drawn on before the cutting begins. Since I shoot with a slightly bent elbow, I wanted the reel off-center to account for this. The larger portion of the reel is to my left.

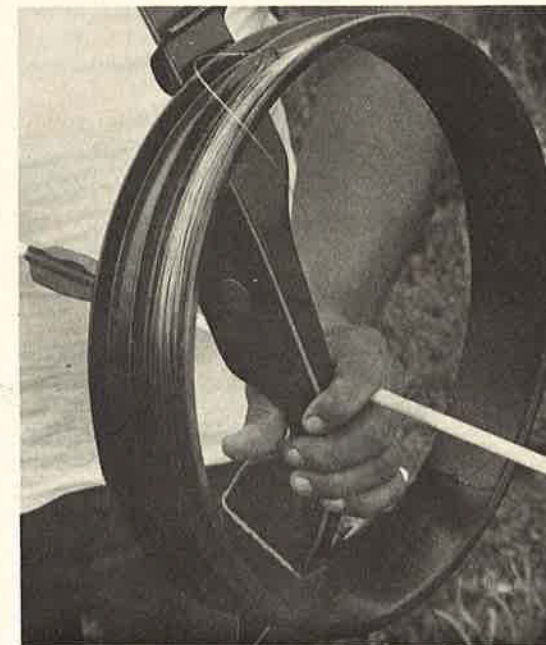
While I prefer to fasten all bow reels with rubber bands rather than tape, this is a matter of personal taste. If you wish a more sturdy type locking system, then cut out a key hole that will accept the top limb of your fishing bow. The bottom ear can now be taped on. I no longer like a rigid bow reel on my equipment since I was dragged down a cactus laden bank about five years ago.

An armor plated 'gator gar hauled me about ten yards before I managed to cut my line. Though I've never shot another fish as large as this Rio Grande dweller, I think I will stay with the rubber bands and leave the fish braking to Pecos Bill.

Eighty-pound mono compliments my rig. It stays in the primitive slit keeper with no problems and casts the full thirty yards of line.



● Mark the mounting "ears" with grease pencil or felt-tipped pen and cut them with an exacto knife, as shown above. If you want to position the reel off center, mark the ear positions accordingly. This is the marking for the top ear, which slips over the limb. The bottom ear can be taped or fastened with a rubber band. Below, the reel has been sprayed to remove glare. A hole for attaching line and a slit for holding line firm until the shot have been made at the top.



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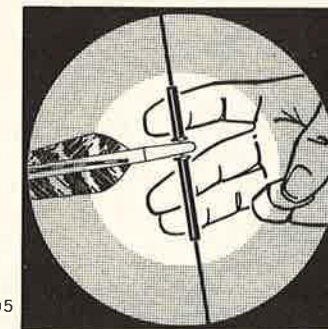
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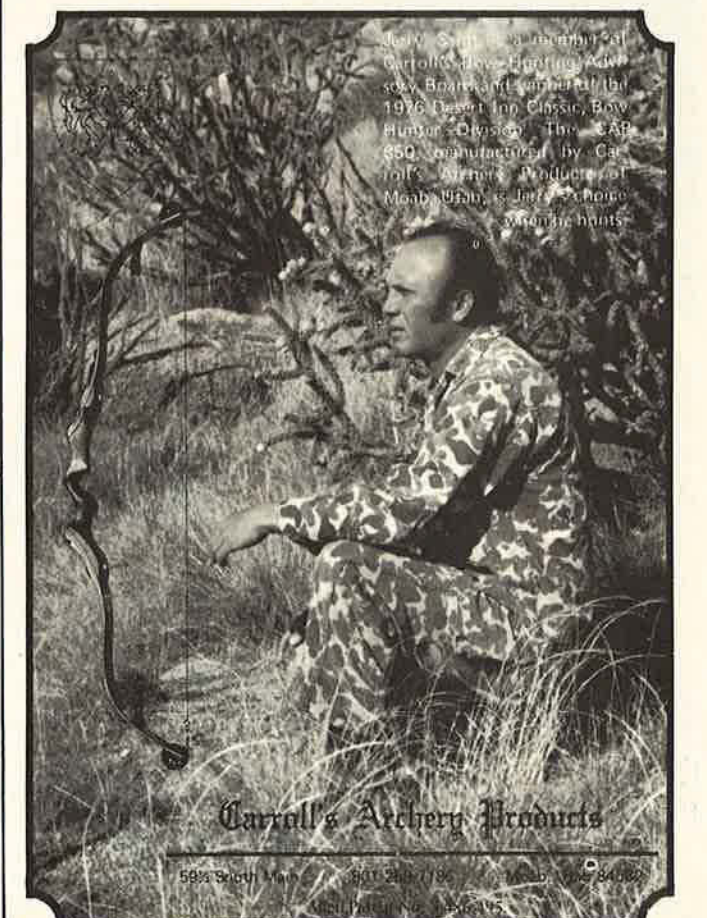
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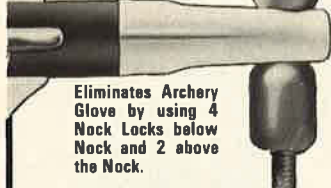


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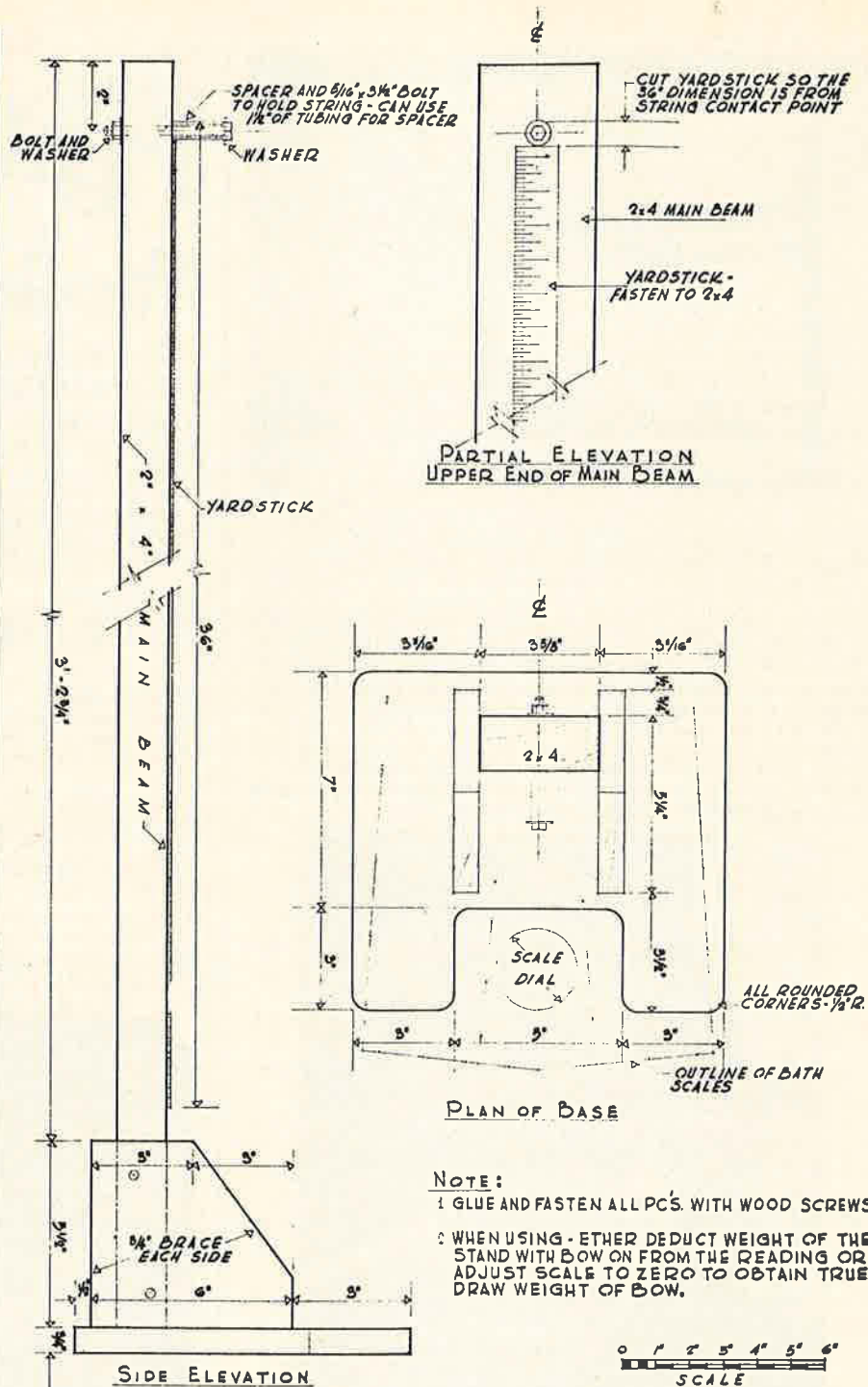
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MAKE YOUR OWN BOW SCALE

by Donald Meek

THERE ARE MANY REASONS a bow scale at home can be handy. Two major ones are that you may want to check a recurve to be sure it's actual draw weight is identical with the draw weight marked on the bow for the 28-inch standard (and to see what your bow's draw weight is at your draw length if you draw above or below this standard), and to check a compound to be sure that it is the draw weight you want and the

stated relaxation weight. This is highly important in matching arrows properly to the bow at your draw length. And should you decide to reset the compound, you will need to check the new settings. This piece of equipment also is handy even if you don't vary the draw weight because you do change strings or cables from time to time.

A standard bow scale is not too difficult to make, but with the components required it can become a rather costly investment for the infrequent use



it is given. It can also be bulky and difficult to store.

There is a solution to this problem which has worked well for me. Everyone seems to have a bath scale around the house, and with a small investment and a few hours time, a simple but effective bow scale can be yours. If you do not have a bath scale, a trip to the local flea market can provide this basic ingredient for a few dollars.

The key to the scale is the stand as shown in the sketch and photo. Constructed of plywood and a piece of 2 x 4 as shown, it is simple to use and when not in use stands in the corner out of the way.

When you use such a scale, take care in applying downward pressure that the string does not slip on the holder. A uniform, slow application of pressure is sufficient to keep the string in position.

This bow scale can be used by one person easily reading both poundage and draw length on the yardstick attached to the upright. A normal bow scale usually consists of a spring scale and cranking or winding device with rope attachments for the bow, all mounted on a frame spanning six or seven feet. It becomes quite a physical spectacle to watch one man operate it by himself and make the necessary readings. With this scale you don't need a "crankee" or a "crankor"—just one will suffice.

(Editor's Note: Our bow tester, Norb Mullaney, suggests that good additions to this scale would be a series of holes drilled at one-inch intervals down the main shaft and a small wooden peg to fit the holes. This would provide an adjustable check stop to indicate how far to pull the bow for whatever draw length you desire.

You would simply draw the bow down until it lightly touches, or is within a hairbreadth, of the check peg. Thus you could more easily visually check the scale reading while your sense of touch would tell you when the bow was drawn to the proper length.

Remember, draw weights are checked with the back of the bow, not the throat of the handle, at the proper distance.)

it makes
sense.

BOWHUNTERS WHO CARE

Eight thousand years is a long time. Long enough to richly entrench bowhunting into its proper place in history. But bowhunting's future is another matter.

There are those who would outlaw bowhunting; those who discover the unfortunately bad practices of a few and tell the world they're the continuing actions of the majority.

We must admit a few things to ourselves: that unsportsmanlike conduct of a few is giving the general public a distorted image of the average bowhunter; that the future of bowhunting hinges on self-policing action by bowhunters; and that those who care should, by example and persuasion, raise the level of those who are hurting the sport.

"Bowhunters Who Care" is an individual program for those who endorse the concepts of true bowhunting sportsmanship, for those who love the outdoors, respect wildlife and know the bowhunter has an important part to play in helping man maintain his sense of values in a highly technical society.

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*They are long gone, but
in their art they live on*

BOWHUNTERS OF THE STONE AGE

by Douglas Mazonowicz

FACING SOUTH and overlooking the once fertile valleys and rushing rivers of eastern Spain are the rock shelters of prehistoric man. Upon the walls of these and other shelters the Stone Age artists recorded their hunting, ceremonial and battle scenes, using pigments dug from soil that have miraculously survived the past 10,000 years.

Although little is known about this period in prehistoric art, it is fulfilling an important role, and provides the specialist with vital information concerning the hunting methods and weapons of our early ancestors.

Carefully drawn animals, groups of fighting bowmen and mysterious signs and symbols are all painted with meticulous care on the walls of shallow rock shelters under overhanging cliffs. Each year brings to light more paintings, and there is little doubt that many decorated *abrigos* await discovery.

Most of the figures are difficult to see, for the dark red pigment (iron oxide) has faded considerably; many have been mutilated, and others overtreated with liberal applications of water in attempts to darken the pigment and thus show up the figures more prominently. During recent years, visitors have chipped rock surfaces in vain attempts to take away the painted figures, and it is only in the shelters that are difficult to reach that the paintings remain in fairly good condition. It is sad to contemplate the rapid disintegration that is now taking place after the lapse of so many thousands of years when the paintings were unnoticed.

It is not easy to establish with any certainty the age of the paintings, but the extreme dates are likely to be between 10,000 and 2,000 B.C. In sharp contrast to the older and more static cave paintings of Spain's north coast, the rock shelter art describes animated scenes, and men are depicted in quantity for the first time. Carried out in a highly stylized manner, they are shown hunting and tracking wild animals. There are several domestic scenes, and a few battles, but the majority of the paintings depict the hunt—the all-important activity that assured survival.

The shelter wall that my guide and I examined appeared at first glance to be bare of any paintings, just a light ochre rock with dark smudges of red and brown. I filled an atomizer from a plastic bottle of distilled water and began to lightly spray the wall in carefully chosen sections. The results were quite amazing. Immediately the water made contact with the wall, so the hidden oxide pigments would become rich-brown, with animals and hunters standing out vividly against the sand colored background. As if by magic the running figures would suddenly appear, allowing for a brief moment photographs to be taken. Although it was a phenomenon I had often

witnessed, the experience never failed to excite me.

In the heat of the day the rock surface dried quickly and within minutes the hunting scene had faded—almost as suddenly as it had appeared—leaving me gazing at a blank wall, hardly believing what my eyes had seen.

Section by section the whole wall was sprayed and photographed. Back in my studio, each slide would be projected onto a screen of paper and the figures outlined with a felt pen. Using extreme patience, each of the sections would be linked together to provide a master copy—the vital key to eventually making the silkscreen copies. The illustration accompanying this is from an actual-size copy I have reproduced by hand using the graphic process known as silkscreen printing, or serigraphy.

Following fifteen years of continual and intensive study of prehistoric art in various parts of the world, there is little doubt in my mind that the bow was first invented, and used extensively, in eastern Spain around 12,000 years ago.

I have made three journeys to the Tassili Plateau in the Central Sahara where I studied the paintings that show the area to have been a green and fertile region many thousands of years ago. Although dating is difficult, the bow appears in paintings dating back to 4,000 B.C.

During prehistoric times, the necessity for, and the invention of, effective hunting weapons varied in different parts of the world. The abundance of animals, climatic conditions and human population growth would be important factors contributing to the emergence of more sophisticated tools and weapons. Yet, without any physical contact, with thousands of miles, and years, separating the various hunting groups, the pattern and chronological order remains the same: a) hand-ax, roughly shaped; b) club, hand-ax attached to length of wood or bone; c) heavy spear, flint point carefully shaped like a laurel-leaf; d) lighter spear or lance, thrown; e) spear-thrower, acting as an extension to the hunter's arm; f) long bow and heavy arrows; g) smaller bow, shorter and lighter arrows.

As the improvement of weapons progressed there came a marked change in hunting styles, from the earliest days of stampeding herds into dug pits, traps, or over cliff-tops (when the hand-ax was used), to the well-planned ambush techniques of the small-bow hunters.

It is also important to remember that in prehistoric times the largest animals were easiest to kill, hence the early disappearance in Europe's cave art of the mammoth, leaving behind hundreds of paintings of bison, bulls, horses, deer, wild boar and mountain goats.

With the eventual extinction of bison, bulls and horses, (due mainly to wasteful hunting methods) there remained only the fleet-footed species: deer, wild boar and ibex or mountain goat. These animals were difficult to kill, and to survive, our hunting ancestors searched desperately for an answer.

A boar hunting composition, possibly the finest to be seen in eastern Spain, describes two events. Seven bowmen are converging on a herd of wild boar; the largest animal is

(continued on page 56)

©Most likely somewhere between 4,000 and 12,000 years old, the rock shelter art describes animated scenes, and men are depicted in quantity for the first time. The majority of paintings depict the hunt—the important activity that assured survival.



"Back in that almost impenetrable whitebrush jungle of thorns is a bayed hog. It's so thick you really can't see the hog."



"So you waded into that thicket to try to get a closer look without getting too close and without getting torn up. But if you crawl the trails you can't shoot."



"The dogs bayed the big boar in a stock pond but the hog outdistanced them in the water and went out the far side of the pond."



"A big boar like this has a shield of hide, gristle and fat almost two inches thick and as tough as tanned boot leather over the shoulder, rib, heart and lung area."

NOWHERE BUT STRAIGHT UP

Baying wild Texas hogs in whitebrush thickets doesn't leave many escape options. Most that exist belong to the hog.

by Judd Cooney

THE BIG BOAR, bayed in the whitebrush thirty feet in front of me, was a perfect picture of what most bowhunters would conjure at the mention of wild boar bowhunting. His big, ugly head, with its long, wrinkled snout and four-inch tusks, beady black eyes and chomping jaws, was anything but a pretty sight. In fact, it was a somewhat scary sight, since Maurice and I were on our hands and knees within easy range of a charge, if he decided that our's was the direction he was going to come.

Maurice's comment, "There he is, stick him!" was almost comical, in that there was no way at the time that I could even draw my bow, let alone shoot through the barbed-wire-like tangle of whitebrush that separated us from the hog. The boar was mad as a nestful of stick-stirred hornets and was trying his best to rip and slash any one of the four dogs that got within range of his knife-sharp tusks. He was snorting and grunting as he pranced around in a six-foot clearing in the midst of the whitebrush. His agility was something to marvel at for being such a big, awkward-looking animal. One minute he was facing one way and a split second later he was facing the other way, all the while popping his jaws and trying to hook or slash a dog with his massive tusks.

Ours was not an ideal situation but most times, when hunting these elusive, tough old boars, the hunter doesn't get to pick his time and place. You have to settle for a place of the hog's choosing.

I was contemplating how in the world I was going to get a good shot at this boar without endangering any of the dogs that were bouncing around him, when he settled the question for us. One minute he was slashing, grunting and squealing, trying to toss a dog, and the next minute there was nothing there but a cloud of dust. He simply vanished in the whitebrush. We were lucky he hadn't come our way or we would have had absolutely no chance to get out of the way unless I took Maurice's advice as we were crawling to the bayed hog regarding a boar's charge in this god-awful tangle.

Maurice simply said, "Jump up in the air as high as you can," and after a pause, he continued, "and don't come

down!" I was sure that I could do just that, but as an added insurance factor I planned on using Maurice as a spring-board. That way, I was sure he would keep the hog busy while I got high enough to be out of the boar's reach.

My first introduction to wild boars in south Texas was several years earlier when I was hunting whitetail deer with Bob Lee, former president of Wing Archery, and Billy Powell, on Billy's lease on the Callahan ranch just outside of Laredo. They had several boars that had been coming in to a baited area at night. For several years, hunters had been trying to get a shot at them. This intrigued me no end and I spent two fruitless evenings waiting for these hogs to come out of the heavy brush into the open. They were coming in long after dark. The third evening, a big, white boar came out just as it was getting dusk and passed within 20 feet of where I was sitting crouched in a little thicket. Something spooked him and quicker than you could blink, and with as much agility and speed as a whitetail buck, he was gone, only to reappear a few minutes later, easing his way back to the baited area.

It was a relatively easy shot at about 30 yards and my arrow sped true, hitting him behind the shoulder. The hog grunted and with speed that you have to see to believe disappeared into a dense tangle of whitebrush. I was sure the hit was vital but could find no blood or hog. The only thing to do was come back the following morning and look for the hog in the thicket. This would mean getting down on my hands and knees and literally crawling along the hog trails trying to find him. Not an altogether pleasing proposition since this area was known to have some fair sized rattlesnakes in it.

The following morning, after an exhausting search, I did find my hog, but the coyotes had left very little except the skeleton, some hide, and my arrow for me to claim as a trophy. An unfortunate situation but from what I understand, a common occurrence in south Texas, with its high coyote population. This only whetted my appetite to get a boar that I could claim as a proper trophy and possibly get a taste of what some of the hunters claim was the best eating to come out of south Texas.

Maurice Chambers, a hog and javelina hunting guide from

Pleasanton, Texas, invited me to fly down and spend a week hunting hogs and javelina with him and his pack of hog dogs. This seemed like a good proposition and it didn't take us long, once I arrived in San Antonio, to get things under way.

South Texas has a good population of wild boar or wild hogs as they are called down there. Many are of the typical Russian Boar type, black as coal, and mean as all get out.

The original stocking of Russian Boar in the south Texas area was done by several of the large ranch owners in the early 1900's mainly for their own hunting enjoyment and sport. These "Rooshuns" found the habitat in south Texas ideal and the populations grew and spread to many of the neighboring ranches and counties. During the depression years, the ranchers introduced domestic strains of pigs into the wild to cross-breed with the Russian boars and provide cheap meat for the ranch hands and laborers. The original stock of Russian Boars crossed readily with these domestic strains and the offspring took on the temperament of the Russians and yet many took on the coloration of the domestic breeds. Today there is a wide range of color combinations in the wild hogs of the Texas brush.

The ranchers are realizing the value of the original strains and coloring, and many are live trapping hogs on their ranches and returning to the wild those resembling the original Russian Boar stock. They take the off-colored ones back to the ranches where they pen and fatten them for food, or haul them to the sales yards where they are sold for meat. In the years to come, most of the wild hogs in the south Texas brush country will be much like the original wild Russian Boar in temperament, size and color. The meaner, tougher and blacker, the better.

My first encounter with wild hogs, while I was hunting with Maurice, came the first day we were out. We were on a ranch south of Pleasanton, driving along, trying to pick up tracks or the scent of some wild hogs, when the dogs started bawling just south of a big patch of whitebrush and prickly pear, indicating that they had winded some hogs or javelina, from the back of the pickup. One never knows what you are going to end up with when you turn the dogs loose in this country.

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How to find the areas which CONSISTENTLY will produce trophy heads

by Charles C. Adams

ARE YOU 100 percent satisfied with the quality of the big game you've taken with a bow? Or do you wish, maybe just a little, that the deer you bagged last year had had a more impressive rack? There are never any guarantees in hunting, but with a little research you'll be able to improve your chances of bagging a trophy buck considerably.

Example. A buddy of mine has been bowhunting deer in Pennsylvania for nigh onto 20 years, and he always brings venison home. He's an excellent hunter, is lucky enough to live in the number one deer state in the country, and has a fine hunting area. You'd think he'd be happy. But I was talking to him the other day and he was complaining about his hunting success. "Ya know, Charlie," he said, "I've been hunting the same area for years, and can't kick about the number of deer I see. But dang it all, I sure would like to get one of those rockin' chair racks. I keep hopin' Ol' Granddad will step out in front of me, but he never does. Best buck I've seen the past ten years was a little ten point. And I got him."

My friend has a classic problem, and I broke the news as gently as I could. For years he's been hunting the wrong part of the state for big bones. His favorite stompin' grounds are in northern Pennsylvania's Potter County, where a substantial number of the state's deer reside. But most of the deer here have small bodies and racks. Fish and Game Department records show that although there aren't nearly as many deer in southern Pennsylvania, some monster bucks are taken on southern farms every year. For big-antlered bucks, my buddy's got to move operations to the south and concentrate on antler-producing areas like Westmoreland and Somerset Counties. If he'd checked out the facts years ago he might have *two* or *three* "Granddads" on his den wall now.

Some bowhunters aren't concerned about getting trophy game, but many are. Almost any hunter, when given a choice, will take the bigger of two bucks—simply because a big rack is more impressive than a peewee rack.

What makes a trophy? *Unofficially*, any animal or bird that appeals to the eye or taste buds of the hunter is a trophy. A small black bear with a glossy coat, a fat young spike bull elk, a forked-horn buck—these all qualify as trophies if the hunter who took them is pleased with what he got. *Officially*, for record-book competition, animals must have exceptional antlers, horns or skulls to make trophy status. If you're persnickety enough to want more than just a "nice" deer or bear and are willing to work for an eyepopping record-class trophy, you've got to scientifically stack the odds in your favor.

What makes big antlers, horns and skulls? Certain parts of the country shine when it comes to producing magnum animals with big heads, and there are reasons for this.

Antlers are the bony headgear members of the deer family grow and shed annually. They're largely composed of calcium and phosphorus, the same ingredients that make up the bones in your own body. Unless an antlered animal happens to live in

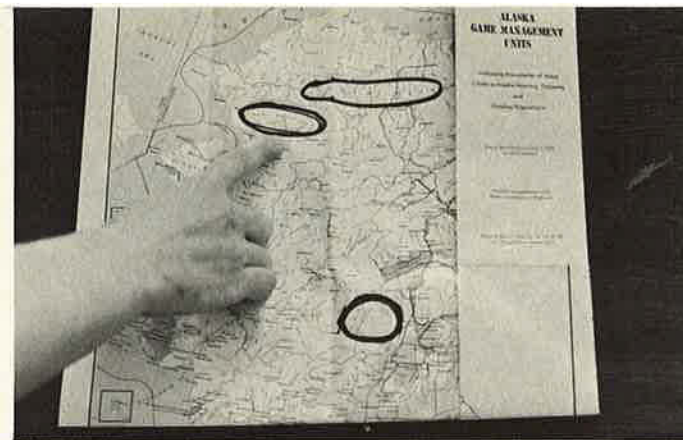
an area rich in these two minerals he's doomed to be less than trophy grade. There are other factors that determine antler size; we'll go into those later. But the presence of calcium and phosphorus in an antlered animal's diet are the largest determinants of antler size.

Horns are made of keratin, the same substance that makes up your fingernails. The size of horns on animals like Dall sheep, Rocky Mountain goats and pronghorns is determined by a very complex chemical balance within these animals. Suffice it to say that if a horned animal is well fed its horns will grow at a maximum rate; if it's undernourished its horns will be skimpy. The presence of calcium and phosphorus in a horned animal's diet isn't too important when it comes to horn length, but these two ingredients influence skull size, and animals in calcium/phosphorus country will generally have heavier horns with bigger bases than animals in other areas. A bigger skull can simply support heavier horns.

Skull size in all game is influenced by the amount of calcium and phosphorus an animal ingests. As a matter of fact, the size of every bone in any mammal's body is affected by the presence of these vital substances. Cougars that eat calcium-fed deer are likely to become big-skulled trophies themselves.

Well, you're probably thinking, if I want an outsized animal I'd better head for calcium/phosphorus country! And you're partly right. But where is this magic land? That's not too easy to answer. Nature's most common form of calcium is limestone. Animals can get phosphorus just about anywhere—it's a common trace element in the earth's crust. And quite often phosphorus occurs naturally in rocks containing calcium. But limestone, alias calcium carbonate, is a form of rock that isn't found everywhere. Most of the calcium in North America is part of a huge limestone belt that stretches across the continent between the 38th and 52nd parallels. Some of this is deep, subsurface rock not available to wildlife. But much of it is exposed, a ready source of body-building, trophy-making calcium. Get a good atlas from your local library and find a map showing geologic characteristics of North America. You'll see that hundreds of exposed limestone deposits form an east-west network across the contiguous 48 states, with an overabundance in the Rocky Mountains, the Midwest and the Southwest. The Rockies were uplifted ages ago and erosion has exposed this mighty mountain range. Glaciation scoured the surface of this continent in the Midwest thousands of years ago, baring tremendous amounts of limestone. Wind and water erosion have had a similar effect on parts of the Southwest. As a result, these general areas produce some tremendous game. If you look over a current Pope and Young or Boone and Crockett record book this will really hit home. The Rocky Mountains dominate these books when it comes to mule deer and elk, the Southwest (including the tail end of the Rockies) has produced some magnum mule and whitetail deer, and the Midwest from Saskatchewan south consistently yields huge-racked whitetail bucks.

This central limestone belt also produces many record-book



cougars, black bears, pronghorns and other big-game species. In addition, there are quite a few smaller exposed-limestone areas scattered across the entire continent, and these are usually good trophy producers too. The best way to find such areas is to study a good geologic map.

Limestone is nature's number one growth stimulant. In limestone-rich areas, plants grow rapidly, providing plenty of food for game. Limestone has a "double-whammy" effect on animals—it makes grass and brush thrive, giving wild creatures plenty of food to eat, and it promotes bone-building and antler-building body chemistry.

The importance of limestone in making trophies cannot be overstressed. It is the single most important factor in the production of big antlers and skulls, and a significant factor in the production of heavy horns. But there are other things that make certain areas better trophy-producers than others. All these secondary factors are a result of *environment* or *genetics*.

Environment determines an animal's antler, horn or skull size in a number of ways. A modern phenomenon involves the heavy use of fertilizers in agricultural areas to produce better crops. What are the main ingredients in many fertilizers? Calcium and phosphorus! Modern farming practices have been producing huge whitetail deer all over the United States and Canada in recent years because farm-country whitetails have an abundance of food before them all the time—and the food is high-quality stuff packed with antler-growing chemicals!

Fires indirectly promote phenomenal plant and animal growth, contrary to the publicity lumber interests disseminate to the public. A large brush fire which reduces old, grown-up plants to ashes is great for animals! Young, fresh shoots grow back vigorously, providing a tender, abundant food source for all sorts of game. Fresh burns draw deer, elk and other big game like candy stores draw kids. The animals browsing on new brush or grazing on new grass get fatter and healthier than those in old-cover areas, and grow bigger headgear. You are what you eat! Clear-cutting operations by loggers perform the same basic function as a fire. They let fresh browse and grass grow, a boon to big game. All else being equal, you'll have a little better chance to take a trophy animal around a new burn than in an old brush patch.

Modern game management practices also improve animal habitat. An overpopulated herd of animals will eat down the countryside, and the resulting lack of food will stunt antlers, horns and skulls. It's interesting to note that some of the top trophy-producing areas in the world don't have a lot of animals, just big ones. An example is Colorado's San Juan Primitive Area, where the new world record Boone and Crockett mule deer was killed in 1974. Anybody who has hunted this area knows that deer are few and far between, but some of them have Goliath heads.

Any time an animal's food supply is cut down its antlers or horn growth is impaired. No underfed animal can grow to its maximum potential. New Mexico's Sandia Mountains are a

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● Study geologic maps to find limestone-rich areas, then check them against game record books and game management maps, shown upper left. Double check your findings by checking with game department officials to find consistent areas of trophy production. Above photo, lush brushy growth is good feed for browsing animals like deer. The richer the feed, the larger the game, so concentrate your hunting efforts in areas with good wildlife feed.



● Burns are beneficial to all kinds of game. New grass and brush grow back vigorously and are a fine food source for trophy growth.

Don't expect to find carp in the same water day after day. Changing water temperatures change their patterns.

STALKING THE CARP TRAILS



by Don Dinndorf

EVEN BEFORE I took that first shot, I knew I was going to like bowfishing.

I went to the archery shop where I had bought my bow the fall before and with some help selected the right reel, line and arrow. The bill came to just under ten dollars. "This certainly isn't an expensive sport," I thought as I headed for the favorite carp creek in the area.

I taped the reel to the bow as I had been instructed and stepped out onto the bridge. There had been a heavy rain a few days earlier and now the hot June sun was pushing the temperature to the upper 80's. Perfect weather for carp I had been told.

Looking below the bridge, I saw three big carp glide through, headed downstream. They were cruising in and out of the flooded weeds along the creek. One came close enough for a shot. I drew, released and watched the arrow sail over him. I quickly wound in the line and shot at another fish, aiming about a foot under him.

I connected! The arrow had penetrated the fish's scales just under the dorsal fin. I wrestled him ashore, pushed the arrow through, reversed the barbs and waited for another shot.

The shots came steadily, and as long as I aimed below them I hit them. The refraction of the water causes the fish to appear higher in the water than they actually are. Many missed shots by even the most experienced bowfisherman can be attributed to this effect.

Later in the day, the sun was covered by clouds and a bright glare began to show on the water. I remembered a TV commercial for polarized sunglasses that showed them cutting through glare somehow. I had a pair in my car, so I decided to give it a try.

By golly, it worked! I could see the carp again. I got two more before I left for home.

Back at the archery shop, I learned more about the sport. I had been shooting a fiberglass arrow that because of its weight, was more accurate in the water. Aluminum, I was told, is too light and quickly loses power in deep water.

The line on my arrow ran from a hole just behind the arrowhead, to and through a hole just in front of the nock. With the line running the length of the arrow, the friction created as the line left the spool would not affect the arrow's trajectory. This arrangement would also help in the actual fight since the bowfisherman would be putting

pressure directly on the barbs instead of pulling from the side as with an arrow tied only to the front.

The next day I went back to the bridge. As I strung my bow in the hot sun, I heard muffled splashing coming from the tall weeds. I walked along the bank until I saw five carp: four small males and one large female. All at once it hit me; they were spawning! That's what all the splashing was about. And that's why I could get so close to them.

As excited as I was, I still got an arrow into the big female and held back on the line. The arrow pulled out and fell to the bottom. When I looked at it I found a large scale at the arrow tip. Apparently, the arrow had hit the scale dead center and pierced it. The scale slid up to the barbs and stopped there, effectively preventing them from opening. The carp's scales are like armor plating, and while they can be penetrated easily one

• Scales are tough on big carp. You would be wise to carry a file and keep the fish point sharp.



time, the next time they may stop an arrow from even a fifty-pound bow.

After I removed the scale and prepared for another shot, a small carp, about a five-pound male, floated by. I led him too far and hit him in the head.

He died instantly. A carp's head is nearly impenetrable, as my arrow showed. It entered and stopped at the top of the skull. The barbs were useless since they were jammed shut by the bone. It took ten minutes to remove the arrow from the solid bone of the fish's head. I made a mental note to never shoot one in the head again.

I took the carp back to the car and put him on a rope stringer to keep him fresh for smoking. I decided to go after the spawning carp by wading, so I tied the stringer to my belt and let it trail behind as I waded the tall weeds.

At the sound of a splash, I saw the weeds part as a carp plowed through them. I cut him off, but missed the shot. I rolled up my line and noticed the trail the carp had made through the reeds and grass. It looked just like a deer trail through a swamp. The carp seemed to follow the trails and hunting them soon became like a deer hunt, waiting for a group and taking the largest fish. It was great sport, and in the tall weeds and knee-deep water, the fights were spec-

tacular. But my stringer was soon filled and I had to leave.

The trailing stringer worked well for transporting the fish in knee-deep water, but after leaving the water their tender gill and mouth parts tore and some fell off the rope.

I put the fish in a gunny sack and took them home. There, the smaller fish went to the smokehouse and the larger to the garden for fertilizer. Most states have laws requiring fishermen to dispose of the fish they take, so don't leave them to rot on the bank somewhere. Carp, or any fish for that matter, will decompose in less than a week, so getting rid of them is small work. The same spot can be used to bury carp week after week.

It was a week before I got the chance to go bowfishing again. The weather had stayed warm and sunny, so I had visions of many carp in the creeks.

I looked over the bridge and saw no fish; not one! I couldn't understand it; the weather was perfect but there were no carp to be found.

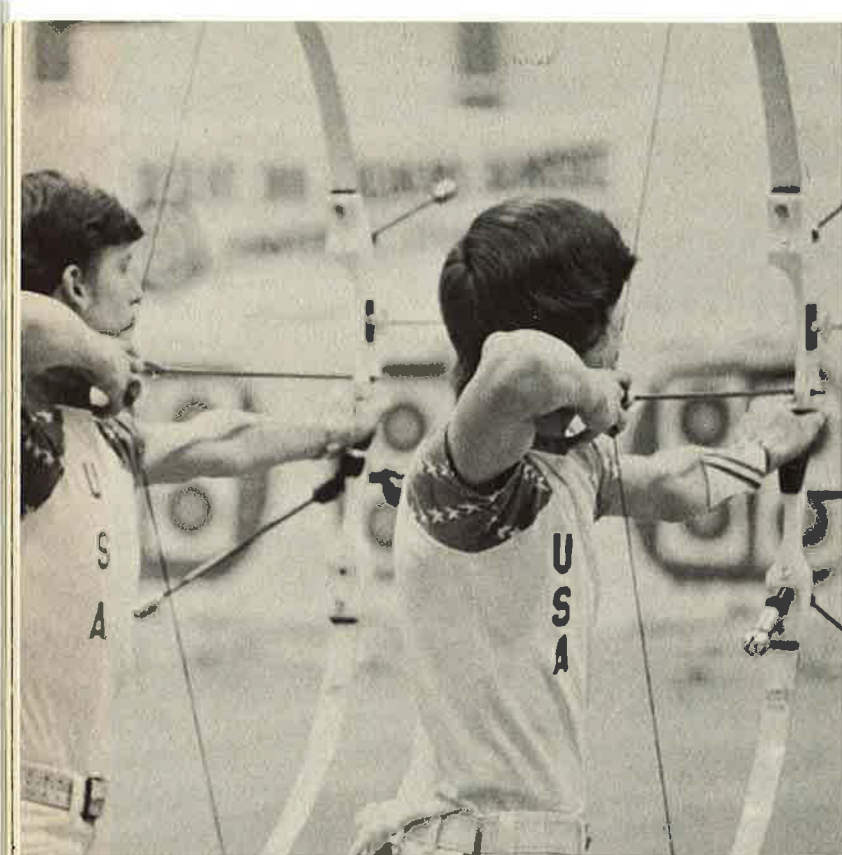
I left the bridge and drove to several other creeks in the area. It was the same story everywhere; no carp in the creeks. I'd seen carp in the creeks late in summer before, long after the spawning season, enjoying the warm water and plentiful food; this didn't make sense.



• The author and his first 20-pound carp, taken from the backwater shallows in the background.

I decided to visit the Sauk River, a stream almost legendary for the huge carp it harbored. I crossed a small bridge at a bend in the river, and at the bend was a backwater. The backwater was an old stream bed, no longer used, but connected to the main stream and full of warm, calm water.

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The Las Vegas Full House

• photos by Glenn Helgeland, Dan Gustafson and Les Belt

New names and familiar names topped the list among the 700-plus archers at this year's Desert Inn Classic



MARK PERFECT didn't quite live up to his name, but he got closer than anyone else did at the 1976 Desert Inn Archery Classic. His steady 296 on the final day, despite being the lowest final round of the money winners in the men's unlimited division championship flight, allowed Gary Portlock to chip only one point from his lead, and Joe Klemeneic, who had been three points down, could chip only two points away.

"My second-day 449 got it for me," Perfect said. "Two points can be tough to make up, even though the pressure is on the leader. I noted that last year Jim Quarles' (1975 champ) best shooting was also on the second day. You're loose then, and over the opening day jitters. Actually, I like to be a point out of it going into the last day. I shoot looser."

"The last day, my concentration broke down a little. There were four different whistles, two of which cost me points. Only in the last year have I been shooting groups this tight, and I'm still not over the tension and idea of competing with the big names. But I'm gaining on it, I guess," Perfect said.

That he is. He won it.

Eva Troncoso, the best there is in women's unlimited shooting these days, led from the start and tacked another title onto her growing list. You would wonder how she continues to get herself up for each tournament. But, like all champions, she shoots only against herself and thinks "only of improving my score. At the end, I want to see how well I've improved." She still feels the pressure, but "it's getting better."

Two things about her shooting equipment that may interest you: She uses the Pacesetter I, V-notch arrow rest which has some vertical "give", and because of this she has found that a nocking point location 1/8" below 90 degrees gives best arrow flight. She also uses the most extreme helical fletching setup possible. She and her husband/coach, Fred, have found that, in addition to straightening the arrow fastest, this also allows her to shoot a minimum height and weight vane and thus get better clearance.

Ken Stanislawski, who has switched from unlimited to limited division shooting, won the men's limited bracket the first time he tried it here. "The recurve is more forgiving for me. The release taught me real aiming, and that helps any time." He shoots as light a weight bow as possible to get the job done. "I can relax better with the lighter weight, get better form," Ken said. His low bow elbow style also helps him relax properly, but just prior to the tournament he had a snap to it that Ed Eliason helped straighten out, hold more solidly against the bow. This gave him better follow through and consistent form.

He was two points back after the first day, but his second-day 435 was five points better than anyone else's in that division and his final 292 was tied only by John Williams' final-day round. Steve Gorr, who is one of the best bowhunters in the country, proved he is an all-around archer by shooting a strong 1157 to finish second behind Stanislawski.

Anita Denend won her women's limited title in a two-end shootoff with Alvena Kinkade.

Anita survived Alvena's stretch drive, which has to be one of the best comebacks shot recently. Lu Shine, who had won this tournament in 1962 and 1967, led after the first two days and was still leading until her last three arrows. But then "someone said something to me and I lost my train of thought . . . maybe got to thinking a little about those two previous wins. One of these days I'm going to have to lay it down, but archery is a love of life and I've still got the will. So we'll see," she said.

Anita has been shooting for only four years, so you know she

• Top row, from left, Rod Baston and Darrell Pace, two of the top men's amateurs; Eva Troncoso and Nancy Pfeilmeier, two top women's unlimited archers; the four pro champions, Ken Stanislawski, Anita Denend, Eva Troncoso and Mark Perfect; and the long line of archers at the full house. Bottom photos, from left, slingshot competition proved it isn't just a game for kids; the Junior Olympic winners plus Darrell Pace, far left, world and U.S. men's amateur champ, Al Henderson, U.S. Olympic coach, next to Pace, and Karl Radde, NAA director, far right; below them, Kevin Busby, front, Speed Round champion; Judy Crim, the tournament's first woman referee.

has worked hard. "I'm learning all the time, getting more consistent form and setup, knowing my equipment better," she said. Her major problem, she said, is that she tends to let her anchor drop forward when she is developing her expansion through the clicker. "The clicker is my security blanket. I can't reach full draw without it. If it's ever banned, I'll have to retire. Yes, I have total target panic without it."

She uses a high nocking point location, 5/8" above 90 degrees, because she shoots a Killian tab and with only two fingers on the string it tends to create a condition much like walking the string. Not everyone will need this much added nocking point height, but she has found this distance helps her arrows compensate best.

Kevin Busby, the Speed Round champion, came to shoot that round. He practiced at home with a 5 1/2" pie plate and worked out a system he thought would help. It did. He shot a Jennings, peaking 46 pounds and holding 32, 1918 arrows with 5/16" 100-grain field points that match the outside diameter of the shafts and accept the special blunts easily, index nock, four five-inch helical fletchings (with four fletches he doesn't need to check to see if the arrow is nocked properly, and the four feathers help correct a sloppy release), a single nocking point locator above the arrow backed up with dental floss for security, a single-pin hunting sight, cushion plunger sanded off around the buildup point so the arrow won't hang on it, and a Bear Weatherest modified with a wire which follows underneath and projects out and up beyond it. He uses this safety wire to help guide the arrow onto the rest, if needed. In his fast shooting sequence, the arrow hits high on the sight window as he nocks it and then slides down. He is already at half draw when the arrow settles on the rest; the wire gives security. He used a 12-inch stabilizer with a five-ounce weight. Steve shoots three-fingers-under.

Busby worked quite a bit with Tom Jennings to determine the best draw weight bow to use. They settled on 46 pounds. Anything around 40 pounds or less wouldn't flip the target on a glancing hit, and a heavier bow can flip the target so hard it may bounce right back.

In amateur shooting, the names at the top are familiar—Pace, Brothers, Baston and Eliason for the men, and Cosgrove, Lorensen, Ryon and VanKilsdonk for the women. Gerri Cosgrove, the women's amateur titlist, is from British Columbia.

One of the finest amateur shooting performances was turned in by young Terri Pesho in the Cadet Girl's division of the Junior Olympic competition. She shot a 556, which wasn't beaten by many of the older JOAD archers.

There were 720 shooters on the line, a true full house. Don Crim, next year's tournament director, said that if this many, or more, archers register next year, they may need to run three shooting lines per day.

In addition to the 23 manufacturer exhibits, which introduced items you'll be seeing in upcoming archery, there was an unusual display of the world's largest collection of slingshots. The collection is owned by Kent Shepard, Toulon, Illinois. Several people highly interested in slingshots met here and formed the National Catapult Association (NCA). If you want more information about this group, write to Rodney Wolf, President, NCA, 146 Pierce St., W. Lafayette, Indiana 47906.

Most archers liked the program of 15 ends on each of the first two days and 10 on the final day. Gale Cavallin, a perennial top shooter in men's unlimited divisions, said "Fifteen ends give you a little more chance to loosen up and really smoke the last few. I'd like to see 15 ends the last day, too."

We're told that an announcement was made over the microphone relative to the reason the *Archery World* editor left the tournament so hastily during the middle of the last round. That reason for departure is named Jody Lynn. She was born two hours before the editor's return flight landed and six weeks before she was expected. Mother and daughter are doing fine, and are currently locked in a struggle to determine who is boss.

EVA TRONCOSO—WOMEN'S UNLIMITED CHAMPION

Eva shoots a Precision Citation compound bow, 48 inches axle to axle, peaking at 33 pounds, holding 26 pounds, 12-strand string, 10 1/4-inch brace height, nocking point 1/8-inch below 90 degrees, No. 3 removable grip and medium low wrist. She uses a Pacesetter I, V-notch arrow rest, no pressure point, no draw check, Lyman Pro sight with fluorescent pink Miletron drop pin, one 28-inch PSE stabilizer with eight-ounce ball, two "Y" counterbalances, Freddie's double rope plate release. Arrows are 1714s, cut to 27 inches, Futura points, fletched with three PSE 2 1/4-inch vanes, extreme helical, Arizona Plastinocks.

ANITA DENEND—WOMEN'S LIMITED CHAMPION

Anita shoots a Bear Custom Viking, 68 inches long, 28 pounds at her draw, 12-strand string, 9 1/4-inch brace height, nocking point 5/8-inch above 90 degrees, standard grip, medium wrist. She uses a Bear Flex Rest, cushion plunger set slightly stiff and left of normal, Klicker draw check, Killian Chek-It sight with fluorescent red drop pin, one standard Bear 24-inch stabilizer with heavy ball and Omni-Coupler, no counterbalances, Killian tab. Arrows are 1616 X7, 27 inches, Futura points, three 3-inch feathers fletched straight, BJ nocks.

MARK PERFECT—MEN'S UNLIMITED CHAMPION

Mark shoots a Jennings "S" handle compound bow, 46 pounds at his draw length, 12-strand string, 9 1/2-inch brace height, nocking point 3/16-inch above 90 degrees, standard grip, low wrist. He uses Freddie's Match-1 adjustable rest, Williamson pressure point set heavy, mirror draw check, Williamson sight with Miletron scope, one 36-inch stabilizer with light ball, no counterbalances, Fletchomatic trigger release with wrist sling. Arrows are 1914 X7, 29 1/2 inches long, Futura points, three Pro-Fletch 180 vanes with extreme left helical, 1/4-inch Plastinocks.

KEN STANISLAWSKI—MEN'S LIMITED CHAMPION

Ken shoots a Bear takedown, 68 inches long, 29 pounds at his 27 1/2-inch draw, 14-strand string, 9-inch brace height, nocking point 1/4-inch above 90 degrees, standard grip, low wrist. He uses a Stanislawski Spring Rest, Klicker, Killian Chek-It sight with a scope, one 36-inch stabilizer, two Hoyt weights on the tip, Bear hunting stabilizer as a counterbalance below the bow hand, Killian tab. Arrows are X7 1814's, 27 1/2 inches, regular target points, three feather fletches, 2 1/2 inches long, helical fletch, Bjorn nocks.

CHAMPIONSHIP FLIGHT

UNLIMITED MEN

| | | | | | |
|---------------------------------------|-----|-----|-----|------|-------|
| Perfect, Mark, Thousand Oaks, Cal. | 446 | 449 | 296 | 1191 | \$750 |
| Klemeneic, Joe, West Allis, Wis. | 444 | 448 | 298 | 1190 | 375 |
| Portlock, Gary, Portland, Ore. | 447 | 446 | 297 | 1190 | 300 |
| Cavallin, Gale, Fountain Valley, Cal. | 444 | 447 | 297 | 1188 | 250 |
| Pearson, Frank, Palmyra, N.J. | 442 | 446 | 299 | 1187 | 200 |
| Quarles, Jim, Richmond, Va. | 441 | 448 | 298 | 1187 | 150 |

UNLIMITED WOMEN

| | | | | | |
|--------------------------------------|-----|-----|-----|------|-------|
| Troncoso, Eva, Monterey Park, Cal. | 439 | 440 | 291 | 1170 | \$400 |
| Anderson, Janice, Minneapolis, Minn. | 439 | 433 | 286 | 1158 | 200 |
| Pfeilmeier, Nancy, Maple Shade, N.J. | 436 | 430 | 290 | 1156 | 150 |
| Beaumont, Nikki, Houston, Texas | 436 | 432 | 285 | 1153 | 100 |
| McClintock, Ginger, Penn Grove, Cal. | 436 | 431 | 285 | 1152 | 75 |

LIMITED MEN

| | | | | | |
|-----------------------------------|-----|-----|-----|------|-------|
| Stanislawski, Ken, Portland, Ore. | 433 | 435 | 292 | 1160 | \$750 |
| Gorr, Steve, Seattle, Wash. | 435 | 430 | 292 | 1156 | 375 |
| Williams, John, Rialto, Cal. | 430 | 428 | 292 | 1150 | 200 |

LIMITED WOMEN

| | | | | | |
|----------------------------------|-----|-----|-----|------|-------|
| Denend, Anita, El Sobrante, Cal. | 380 | 396 | 252 | 1028 | \$400 |
| Kinkade, Alvena, Boise, Idaho | 363 | 397 | 268 | 1028 | 200 |

OPEN FLIGHT 1

| | | | | | |
|---------------------------------|-----|-----|-----|------|-------|
| Tyler, Dan, Pocatello, Id. | 440 | 442 | 299 | 1181 | \$300 |
| Moberg, Don, Hayward, Cal. | 440 | 443 | 298 | 1181 | 190 |
| Parnell, Gene, Gillette, Wyo. | 442 | 440 | 296 | 1178 | 150 |
| McCawley, Dale, Gillette, Wyo. | 443 | 439 | 296 | 1178 | 125 |
| Ostling, Ken, Phoenix, Az. | 439 | 443 | 295 | 1177 | 100 |
| Bringham, Bob, LaVerne, Cal. | 439 | 442 | 295 | 1176 | 75 |
| Carlson, John, Lake Mills, Wis. | 440 | 438 | 297 | 1175 | 50 |

OPEN FLIGHT 2

| | | | | | |
|--|-----|-----|-----|------|-------|
| Ragsdale, Terry, White Oak, Texas | 434 | 438 | 295 | 1167 | \$260 |
| Elinberg, Sonny, Modesto, Cal. | 437 | 433 | 295 | 1165 | 175 |
| Groves, Dick, Albuquerque, N.M. | 433 | 438 | 291 | 1162 | 130 |
| Lendman, Larry, Lancaster, Ohio | 441 | 428 | 293 | 1162 | 110 |
| Johnson, Donald, Colorado Springs, Colo. | 431 | 439 | 292 | 1162 | 90 |
| Fowler, Gale, Thousand Oaks, Cal. | 429 | 437 | 295 | 1161 | 70 |
| Wheaton, Roger, Copperas Cove, Texas | 438 | 429 | 293 | 1160 | 45 |

OPEN FLIGHT 3

| | | | | | |
|-------------------------------------|-----|-----|-----|------|-------|
| Bauman, Howard, Bell, Cal. | 438 | 423 | 295 | 1156 | \$230 |
| Oland, Gordon, China Lake, Cal. | 426 | 437 | 292 | 1155 | 160 |
| Becker, C. (Denny), New Lenox, Ill. | 432 | 431 | 291 | 1154 | 110 |
| Cottam, Allen, Brigham, Utah | 432 | 426 | 295 | 1153 | 95 |
| Woody, Kenneth, Des Moines, Iowa | 434 | 426 | 293 | 1153 | 75 |
| Pickney, Dave, Tulsa, Okla. | 429 | 432 | 292 | 1153 | 60 |
| Jacobsen, Robert, Provo, Utah | 432 | 431 | 290 | 1153 | 40 |

OPEN FLIGHT 4

| | | | | | |
|---|-----|-----|-----|------|-------|
| Johnson, Joyce, Pleasant Grove, Utah | 428 | 425 | 292 | 1145 | \$190 |
| Kempf, Dennis, Sherman Oaks, Cal. | 430 | 419 | 294 | 1143 | 135 |
| Downing, Mike, San Diego, Cal. | 427 | 424 | 290 | 1141 | 100 |
| Robinson, Rick, Grants Pass, Ore. | 409 | 437 | 294 | 1140 | 80 |
| Larson, Marlow, Ogden, Utah | 427 | 424 | 288 | 1139 | 70 |
| Pettengill, Patrick, Belchertown, Mass. | 422 | 431 | 285 | 1138 | 50 |
| Stinson, Terri, Lakewood Cal. | 423 | 425 | 289 | 1137 | 35 |

OPEN FLIGHT 5

| | | | | | |
|-------------------------------------|-----|-----|-----|------|-------|
| Graham, Colleen, Bountiful, Utah | 426 | 414 | 287 | 1127 | \$165 |
| Scheuneman, Lester, Brookfield, Mo. | 411 | 421 | 290 | 1122 | 110 |
| Haas, Lisle, Rangely, Colo. | 418 | 420 | 284 | 1122 | 80 |
| Grimsled, David, LaCrosse, Wis. | 424 | 415 | 282 | 1121 | 70 |
| Hagedorn, Dan, Omaha, Neb. | 423 | 418 | 280 | 1121 | 56 |
| Tibbetts, Ben, Rialto, Cal. | 414 | 426 | 280 | 1120 | 40 |
| Robin, Jack, Lakewood, Cal. | 414 | 425 | 280 | 1119 | 30 |

OPEN FLIGHT 6

| | | | | | |
|---|-----|-----|-----|------|-------|
| Thomas, Jack, La Porte, Texas | 393 | 431 | 291 | 1115 | \$130 |
| Fisher, Al, Bellflower, Cal. | 407 | 420 | 287 | 1114 | 90 |
| Kili, George, Bakersfield, Cal. | 407 | 418 | 288 | 1113 | 65 |
| Allen, Rose, Mason, Iowa | 411 | 417 | 284 | 1112 | 55 |
| Dewyer, Dennis, Phoenix, Az. | 420 | 409 | 282 | 1111 | 45 |
| Bowman, Stuart, Edmonton, Alberta, Can. | 415 | 411 | 282 | 1108 | 30 |
| Emig, Emory, Tucson, Az. | 408 | 419 | 281 | 1108 | 25 |

OPEN FLIGHT 7

| | | | | | |
|----------------------------------|-----|-----|-----|------|-------|
| Robinson, John, Ft. Worth, Texas | 379 | 429 | 283 | 1091 | \$115 |
| Trigg, John, China Lake, Cal. | 398 | 410 | 277 | 1085 | 75 |
| Lain, Charles J., Hayward, Cal. | 417 | 388 | 279 | 1084 | 55 |
| Giffin, Bob, Denver, Colo. | 402 | 406 | 276 | 1084 | 45 |
| Miller, James, McGill, Nev. | 413 | 396 | 273 | 1082 | 40 |
| Rudal, Alfred, Boise, Idaho | 396 | 414 | 272 | 1082 | 30 |
| Remigio, John, Arvada, Colo. | 386 | 415 | 280 | 1081 | 25 |

OPEN FLIGHT 8

| | | | | | |
|--|-----|-----|-----|------|-------|
| Jacquot, Frank, DeSoto, Ill. | 382 | 405 | 284 | 1071 | \$100 |
| McArthur, Frank, Layton, Utah | 397 | 392 | 273 | 1062 | 65 |
| Castor, John, Oxnard, Cal. | 388 | 400 | 270 | 1058 | 50 |
| Boorman, Ron, New Westminster, B.C. Can. | 350 | 418 | 289 | 1057 | 40 |
| Fairclough, Dave, Granger, Utah | 363 | 413 | 281 | 1057 | 30 |
| Kertscher, Frances, Buena Park, Cal. | 377 | 404 | 274 | 1055 | 25 |
| Elott, Sandy, College Park, Ga. | 398 | 399 | 267 | 1054 | 20 |

OPEN FLIGHT 9

| | | | | | |
|----------------------------------|-----|-----|-----|------|-------|
| Woodrich, Wayne, Westfield, N.J. | 384 | 365 | 266 | 1015 | \$ 85 |
| Horton, Naomi, Denver, Colo. | 359 | 385 | 268 | 1012 | 55 |
| Steenburgen, Loran, Phoenix, Az. | 406 | 330 | 269 | 1005 | 40 |
| Gordon, Jay, Tempe, Az. | 377 | 371 | 256 | 1004 | 35 |
| Matye, Lee, Sangus, Cal. | 368 | 381 | 249 | 998 | 25 |
| Hardy, Rick, Albuquerque, N.M. | 381 | 363 | 253 | 997 | 20 |
| Temple, Kirby, Coos Bay, Ore. | 331 | 396 | 266 | 993 | 15 |

OPEN FLIGHT 10

| | | | | | |
|---------------------------------|-----|-----|-----|-----|-------|
| Swanson, George, Modesto, Cal. | 349 | 331 | 245 | 925 | \$ 65 |
| Snyder, Fred, Albuquerque, N.M. | 343 | 339 | 233 | 915 | 45 |
| Huth, Andrea, Las Vegas, Nev. | 332 | 348 | 228 | 908 | 35 |
| Jarvis, James, San Diego, Cal. | 328 | 345 | 231 | 904 | 25 |
| Giffin, Jo, Denver, Colo. | 317 | 348 | 234 | 899 | 20 |
| Owen, Jeanne, Las Vegas, Nev. | 341 | 324 | 234 | 899 | 17 |
| Barlow, Dennis, Bountiful, Utah | 332 | 343 | 224 | 899 | 12 |

ARCHERY SPEED SHOOT

| | | |
|---------------|---------------------------------|-------|
| Winner | Kevin Busby, Long Beach, Cal. | \$500 |
| Runnerup | Ron Ellis, Fontana, Cal. | 300 |
| Semi-Finalist | Jerry Preston, Buena Park, Cal. | 200 |
| Semi-Finalist | Steve Gorr, Seattle, Wash. | 200 |

BONUS MONEY

| | | |
|--------------------|------|-------|
| BAREBOW MEN | | |
| Younger, Fred | 1128 | \$100 |
| Tuller, Al | 1109 | 75 |
| Anderson, James | 1107 | 50 |

BAREBOW WOMEN

| | | |
|-------------------|------|-------|
| Griffith, Carolyn | 1039 | \$ 50 |
| Younger, Paula | 1020 | 25 |

BOWHUNTER MEN

| | | |
|---------------|------|-------|
| Saint, Jerry | 1079 | \$100 |
| Rangel, Louis | 1048 | 75 |
| Wilson, Glen | 1043 | 50 |

BOWHUNTER WOMEN

| | | |
|---------------|-----|-------|
| Owen, Jeanne | 899 | \$ 50 |
| LaComb, Anita | 835 | 25 |

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| | | |
|------------------|------|----------|
| FREESTYLE | | |
| Mark Perfect | 1191 | \$375.00 |
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| Gary Portlock | 1190 | 237.50 |
| Gale Cavallin | 1188 | 125.00 |
| Jim Quarles | 1187 | 91.66 |
| Frank J. Pearson | 1187 | 91.66 |
| Rich McClintock | 1187 | 91.66 |
| Mel Stanislawski | 1186 | 80.00 |
| Bill Wilkerson | 1185 | 75.00 |
| Don Moberg | 1181 | 70.00 |
| Wm. (Bill) Mills | 1180 | 62.50 |
| Billy Schutz | 1180 | 62.50 |
| Gary Lyman | 1179 | 52.50 |
| Gene Lueck | 1179 | 52.50 |
| Dale McCawley | 1178 | 42.50 |
| Gene Parnell | 1178 | 42.50 |
| Larry Matthews | 1177 | 36.66 |
| Kenneth Ostling | 1177 | 36.66 |
| Lonnie McGarrath | 1177 | 36.66 |



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By MARTIN

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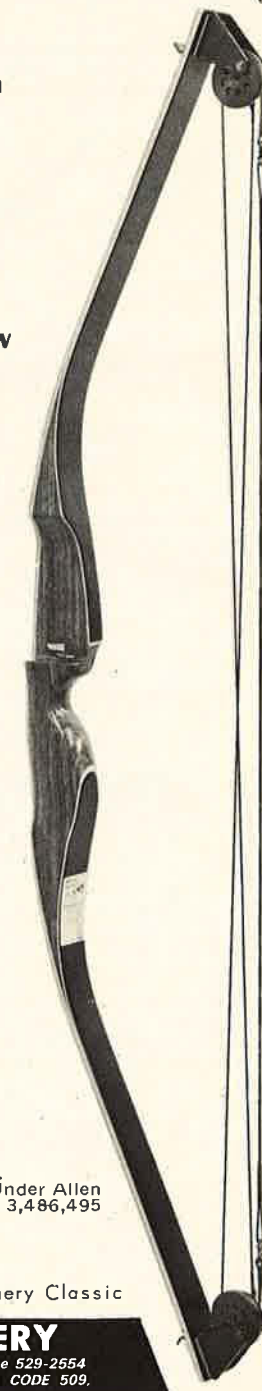
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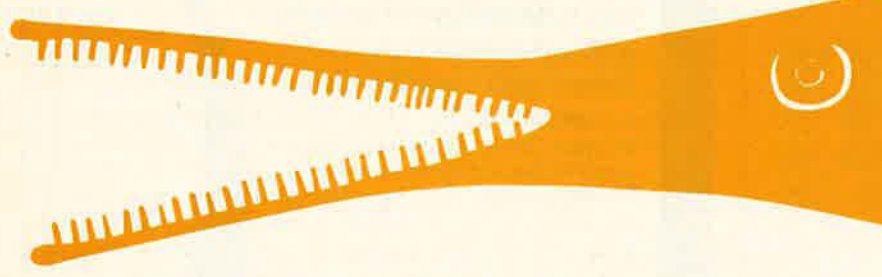
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THERE'S A LOT OF WATER AROUND LONG-NOSE GAR AND BOWFIN



by Gary Hansen

IT WAS THE FIRST DAY of the 1975 bass season and I was rowing a boat through a duck marsh on Michigan's Lake Leelanau. The marsh is ideally suited for bass spawning and a large school swam just within casting distance; but we weren't looking for bass. Jim Poe exclaimed, "There's one on the starboard." I turned the boat starboard and took one last stroke of the oars, letting us glide silently toward our quarry. As the boat neared our objective I could see the half-dollar-sized orange and black tail marking that distinguishes the male bowfin (dogfish) from the female.

Jim neatly skewered the bowfin with his fish arrow and the water exploded. Working the line carefully, to keep it from becoming entangled in the weeds, Jim played the fish out. After making several wild runs the fish finally tired.

Normally, we trade off shooting and rowing positions after each successful shot, but Jim spotted a close school of gar pike so I maneuvered the boat within range. The school consisted of several average long nose gar swimming close together. Jim aimed for the center fish and released. Instantly, the school scattered. For a split second it seemed Jim had missed; then the fish took off. The line burned through Jim's fingers as he fought for control. The gar pike came half out of the water several times, but he was firmly impaled on the fish arrow. After four minutes the fight was over.

Consistently hitting gar pike and bowfin with a bow and arrow is seldom easy. The experienced carp shooter will quickly discover that carp are relatively easy targets when compared to gar pike and bowfin. Although I have taken larger, the largest long nose gar and bowfin I have ever weighed and measured were 5 pounds, 40 inches and 6.5 pounds, 26 inches, respectively. From their dimensions, it is not necessary to be a master mathematician to see both gar pike and bowfin present a long, narrow target. A large, long nose gar will often be no more than three inches in diameter.

The difficulty of hitting these slender targets is compounded by water refraction. The refraction of light in water causes the fish to appear to be in a different position than it actually is. The farther the archer is from the fish, the more deceiving water refraction becomes. For this reason any shot over fifteen feet is usually a waste of time.

To hit a distant fish, it is necessary to shoot under where it appears to be. How much under varies, depending on the distance and the depth. The best chance for a successful shot comes when a fish is pointed directly toward or away from the hunter. At this time the amount of "hold under" is less critical.

Fish arrows will often glance off if the



• Wide brim hat and sunglasses help bowfisherman see into the water.

fish is not hit squarely. The scales on both gar pike and bowfin are extremely difficult to penetrate. Gar pike scales are so hard that the skins were once used as armor by the Indians. The skins could easily turn a spear or a knife. For this reason a bow of at least 45 pounds pull is recommended; mine is 55 pounds at my draw length.

Choose a fish arrow point that is long and slender for better penetration. I would advise staying away from points which must be taken apart to remove the fish. These points are inconvenient to use and often come apart while the archer is fighting the fish. Also avoid points with wire barbs; these barbs will sometimes bend, allowing the fish to free itself. I prefer points with strong, metal barbs that are easily reversible. Make sure the point is pinned to the shaft and not just glued.

Neither gar pike nor bowfin are usually eaten but they can provide good off-season sport for the archer. Some people say these fish taste excellent when smoked, but I utilize mine for fertilizer. Do not make caviar out of gar roe; it is

• The bowfin is a tough scavenger.



toxic. Gar pike and bowfin prey on small game fish and compete with game fish for food. So in most cases destroying these predatory fish is a good conservation practice.

Gar pike and bowfin move into the shallow marshes of Michigan lakes soon after the ice goes out. They can be found in the shallows all summer, but the heaviest concentrations are during May and the first part of June. Later in June, lily pads and other weeds become thicker, making bowfishing more difficult. The Michigan season starts May 1 and continues through August 15 on inland and non-trout waters. It is open year round on the Great Lakes. In Michigan, a fishing license is required to hunt these fish. Seasons and rules vary from state to state, season to season, and sometimes from lake to lake; check the local rules before going bowfishing.

The bowfisherman must handle gar pike and bowfin with care. Gar pike have hundreds of needle sharp teeth which can cause a severe laceration. The bowfin has powerful jaws which are capable of removing a finger that wanders too near its mouth. Also, the mucus that covers both species can promote infection in an open wound.

In bowfishing, as with any hunting, the more the hunter knows about his quarry the better his chances for success. Both gar pike and bowfin have habits which can be used against them by the archer. When the bowfin is frightened it will often swim into the mud or silt at the bottom. After the water clears it is sometimes possible to see a fin, tail or mouth protruding out of the mud; this provides the hunter with a stationary target.

A bowfin that is spooked from its spawning bed will often return within a few minutes. I have often missed the first shot at a bowfin and had it return before I had completely retrieved my fish arrow. If the bowfin does not return right away, remember the spot and go back to it.

On bright sunny days gar pike can occasionally be seen lying motionless near the surface, presumably sunning themselves. At times like this gar pike seem to lose much of their normal wariness. If approached silently it is often possible to row within a few feet without spooking them.

Sometimes it is to the hunter's advantage to anchor and wait for a school of gar pike to swim by. When gar pike school, this can be a very effective way to hunt them. With a little scouting, the hunter can usually determine which routes are used most frequently by gar pike schools. I have discovered that points of land jutting out from the shore are often good places to wait for an ambush.

While it is not necessary to wear
(continued on page 60)

WESTERN COLORADO BIG GAME HUNTING

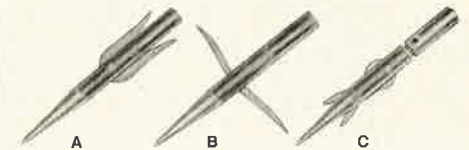
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STING-A-REE POINT



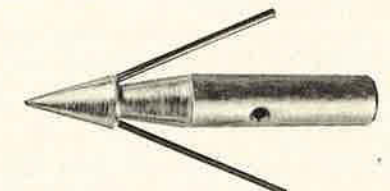
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- A. Fish Point in flight
- B. Barbs open in retrieve-maximum holding power
- C. Barbs reversed for removal

Simply twist the arrow shaft counter-clockwise to reverse barbs and remove arrow. You can't lose tip or barbs.

Sting-a-ree Fish Point \$2.89 ea.
Sting-a-ree Fish Arrow \$4.46 ea.

Lil' STINGER POINT

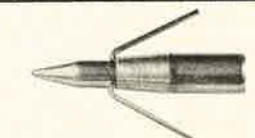


DOUBLE BARB HARPOON POINT

Screw off point to remove arrow

Lil' Stinger Fish Point \$1.58 ea.
Lil' Stinger Fish Arrow \$3.15 ea.

WEE STINGER POINT

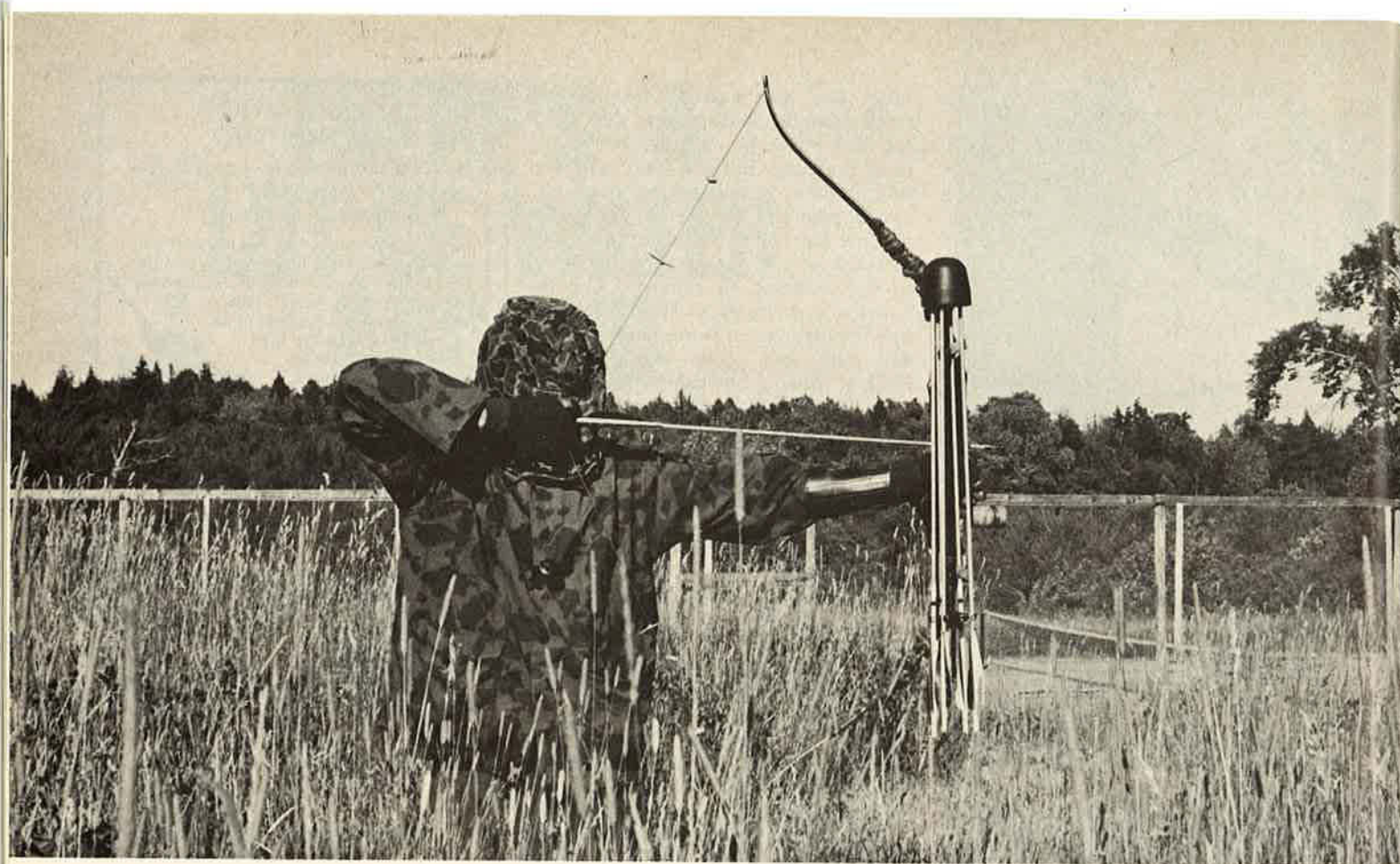


Screw apart style, Spring wire barb

Wee Stinger Point \$.79 ea.
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“Norman, there’s a thingamabob

by Norm Jolliffe

IT TAKES SKILL, cunning, and endurance. What does? Hunting those foolish thingamabobs with a bow and arrow. What thingamabobs?

I can remember my Granddad, with the Springfield he said he used in Cuba with Teddy Roosevelt, crawling on his belly down from the freshly whitewashed porch in back of the house, his face flushed in a fantasy or with indignation or because he was exerting himself too much—we had just consumed supper and Granddad had high blood pressure and we had been haying hard all day. I can see Granddad moving on his belly to the clump of pink hibiscus which was about fifty yards from the garden. From behind the hibiscus he can see the thingamabob better than we can from the dining room windows. But we can see the bushbeans shake a little where the beast is feeding.

Granddad gets up onto his knees, moves the Springfield to his shoulder.

KAA . . . BOOM . . . OM!

“Well, I got the damn thingamabob!” Granddad shouts.

“Well, I declare!” Grandma exclaims. “Dad finally got that silly thingamabob. He was a smart one! But I don’t know

why Dad doesn’t use the .22.”

The Springfield always seemed to be handier for Granddad than the .22. Besides, the .22 was what grandma used.

“I hope surely you shot him in the head, Dad!” Grandma calls.

“Yep!” Granddad replies. He is in the garden by the bushbeans bending down.

“I’m not going to fry up any thingamabob unless you shoot him in the head, Dad!”

“Oh, stop fussing! Of course I shot the thingamabob in the head!”

As of this writing, I have only shot two thingamabobs in the head with my archery equipment. One was the kind of shot I always try to make—a quick, clean kill—but the other shot didn’t turn out that way. So I must recommend that you do not attempt to shoot a thingamabob in the head with archery equipment. About half the time you would only cause the critter misery. With a high-powered rifle, however, you should go for the head. Otherwise you just mess up the meat. That’s why Grandma preferred the .22. She could make a little neat hole anywhere and make a quick, clean kill. But please don’t get the idea she could have done this with a target arrow or a hunting arrow with a field

point. A .22 has much more shocking power and, besides, Grandma wasn’t an archer. But speaking of that one quick, clean kill in the head I made—I did that with a target arrow and my wife’s 43-pound P-II. I was filled with indignation and these were the only weapons handy. I pimpled the thingamabob’s head at 17 yards. The deed was humanely accomplished and we ate the thingamabob with pleasure next day for supper. At least our children appreciated him more than they would have the spinach he had destroyed.

THINGAMABOB IN THE LETTUCE

As for that other shot in the head, that wasn’t an accident either. It was close to supper time and I was sitting at the kitchen table, enjoying a beer, twitching my toes and reading the newspaper. My wife was at the kitchen sink doing something and looking out the window above the sink at the garden. She could view the garden, see the work it needed, and inspect it simply by being near the kitchen sink.

Suddenly she stamps her foot. “Oh, for goodness sake! There’s a . . . thingamabob in the lettuce! Quick, Norman!”

I string up my 65-pound Tice & Watts and grab some .316 Magnums tipped



•A young thingamabob often will stretch its luck.

in the garden”

with two-bladed Bear broadheads, my favorite archery equipment at that time.

This particular thingamabob is not a challenge. It is usually the young ones that are unrealistic enough to get in the garden. This is a young one. The old ones, wiser by far, remain in the fields or rock walls or along the edges of the forest. They are the trophies, relatively speaking. Also, unfortunately, they are tougher by far to chew on, so you have to leave them in the pot an extra hour or two.

In any case, this thingamabob is hiding behind a rhubarb plant, but I can see one eye looking at me from between two large leaves. Now, the old trophies realize (it is remarkable how useful even the slightest amount of brain tissue can be in a survival situation) that you mean them no kindness when you slowly draw and hold and aim an arrow at them. They duck or run for cover.

This thingamabob just keeps looking at me with one eye from between two rhubarb leaves.

I release.

The .316 Magnum doesn’t go all the way through and the creature runs. When I catch up with the thingamabob and grab him by his tail . . . his tail comes off. His tail comes off! Then I

dispatch the thingamabob.

Remember that. Never grab a thingamabob by his tail.

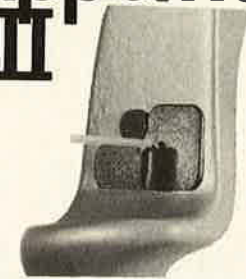
Never use a light hunting arrow on a thingamabob. The physical laws of mass and inertia are more significant than the physical laws of velocity and acceleration in so far as concerns hunting arrows making good penetration on tough game. Even with compound bows, heavy arrows work better than light arrows on tough game. A thingamabob is tough. A tough animal isn’t a paper target. Save your 2016s, fellows, for the paper targets. Even a Port Orford cedar arrow is superior to a 2016 on tough game.

Thingamabobs are groundhogs. That’s what we called them in our family in West Virginia when I was a boy. Other families called them other things. In Maine, where I live now, the species is called either woodchucks or groundhogs. But now in Maine groundhogs are regarded with less hysteria. Earlier, families in Maine probably called them by other names.

With archery equipment, never shoot a groundhog in the head. You will be lucky if you kill him cleanly. Use a heavy arrow and a sharp broadhead. The

(continued on page 62)

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THE HUNTER'S STORY

#2

ARCHERY WORLD

assembled these facts you always wanted to give about hunting but seldom had at hand. This is the second in a series of fact sheets which will help you understand and explain the role sport hunting has played in the development of modern wildlife management programs and wildlife species population security.

MONEY: WHO HAS PROVIDED IT, AND HOW MUCH

The National Shooting Sports Foundation estimates that nearly 300 million recreation-days are spent hunting annually. But no one can put a price tag on a day or hour spent at a pleasant pastime, just as no one can put a price tag on an orange sunset or the sight of a flight of geese headed north in the spring.

Hunters have indicated their willingness to use their sporting dollars to help benefit all species of wildlife and all types of recreation. They pour nearly \$7 billion into the nation's economy each year.

- A record 43 million Americans in 1974, an increase of 1.7 million from 1973, spent \$270 million, up \$29 million from 1973, on state hunting and fishing licenses.

- Hunting and fishing license sales are now the biggest source of funds for state wildlife management agencies. The 16 million hunters of 1973 provided \$124 million to state agencies.

- Every waterfowler, in addition to his state hunting license, is required to buy a \$5 federal duck stamp. The revenues raised here are used by the government to buy or lease wetlands for ducks and geese. And, again, the contribution goes

beyond game species because the many non-game birds and animals sharing habitat with waterfowl benefit as well.

Since their introduction in 1934, federal duck stamps have raised more than \$153 million and presently produce more than \$11 million annually.

- Hunters alone, dating as far back as the 1920's, have paid the lion's share for conservation, so far a massive \$2.5 billion; and through four major avenues are presently paying more than \$188 million a year.

License fees furnish \$124 million of this; the excise tax on sporting arms and ammunition (Pittman-Robertson program) contributes \$44 million; the fishing tackle tax (Dingell-Johnson program) contributes \$15 million; the tax on handguns provides another \$4 million. And in 1975 a similar 11 percent excise tax was begun on archery equipment sales.

The federal government has provided \$600 million in matching grants to state fish and wildlife agencies over the years since these programs began.

A minimum of half of the Pittman-Robertson funds are used to improve range by planting feed and cover, restocking game, constructing marshes and ponds for waterfowl, providing watering places for wildlife in arid areas, and the purchase or lease of wildlife lands.

Funds from this program have enabled the states to obtain more than three million acres for wildlife refuges, wintering ranges, wetlands, and public hunting grounds—more than the total acreage of the state of Connecticut.

Land acquisition from taxes on sporting arms and ammunition provides the non-hunting public as well as the hunter with state-owned recreation grounds.

In addition to wildlife restoration and land acquisition, these monies also help build public shooting ranges and support hunter safety training programs in all states.

The tax funds are provided on a 3:1 ratio; for every three federal dollars, the states have contributed at least one more as required matching funds.

A summary of expenditures by the states since 1938 shows that 50 percent was spent for development, 26 percent for research, 19 percent for land acquisition and less than five percent for administration.

- In 1973 alone, the Pittman-Robertson program brought in nearly \$50 million from hunters to be apportioned to states.

- It is estimated that hunters spend more than \$100 million a year developing wildlife habitat for all species, game and non-game, on privately owned land.

- Duck hunters formed DUCKS UNLIMITED (DU), a private organization, in 1937 and since then have poured over \$35 million into Canada to construct 1,200 duck habitat areas designed to contain water through drought and flood. DU funds have built or restored more than two million water acres, prime waterfowl nesting habitat with over 11,000 miles of protective shoreline.

DU's goal for the 1970's calls for the development of another 4.5 million acres of nesting habitat.

These look like some whopping totals, don't they? And they are. Hunters have contributed a lot from their pocketbooks over the years, and they continue to contribute.

THE FORCES AGAINST SPORT HUNTING, AND THEIR MONEY

But before you bask in the pleasure of knowing you have done these good things, and helped our wildlife situation, take a look at funds available in only one recent year (1973) to the five major anti-hunting organizations in this country. This should give you some idea of what remains to be done, and what type of organized funding hunting is up against.

In 1973, the Defenders of Wildlife, membership of 39,000, had estimated gross revenue of \$10,000,000 and disbursements of \$2,000,000.

Fund for Animals, Cleveland Amory president, membership of 60,000, gross revenue of \$435,032, up 64.2% from 1972, disbursements of \$330,420, net worth increase of 59.7%.

Humane Society of the United States, membership 70,000, gross revenue of \$1,470,484, disbursements of \$1,234,-

211, net worth of \$2,455,643.

Animal Protection Institute, membership not available, gross revenue of \$639,331, up 142.2% from 1972, disbursements of \$630,810 with more than one-third of these funds used for advertising to solicit funds.

Friends of Animals, membership of 50,000, gross revenue of \$1,411,440, up 85.8% from 1972, disbursements of \$1,067,901, net worth increasing to \$654,446, up 74.4%.

Total 1973 revenue of the five was \$13,956,292, total 1973 disbursements were \$5,263,342. (These are only five of 25 organizations with full-time representatives in Washington, D.C. whose main goal or one of their main goals is to eliminate hunting.)

Where do those funds go? Much goes for anti-hunting advertising and membership recruitment. More is being channeled into lawsuits to prevent various sport hunts or the hunting of certain species. Some is relatively well spent. The Friends of Animals spent 57% of their 1973 budget spaying and neutering cats and dogs. But that cannot really be labeled wildlife conservation.

WHAT HUNTERS CAN DO

Organize and contribute, mainly: The two main avenues of effort are: 1) public education of the value of sport hunting in sound wildlife management practices, and 2) presenting the wildlife manage-

ment facts when sport hunting is questioned in court. And that is the route anti-hunting groups are increasingly taking. Another thing all sport hunters can do is be true, ethical hunters at all times, competent and responsible in their actions.

Here are organizations you can join, or groups to which you can contribute:

- Hunters' Legal Defense Fund, c/o Game Conservation International, 900 N.E. Loop 410, Suite D-211, San Antonio, Texas, 78209. Organized to defend wildlife management and sport hunting in court.

- National Society for Conservation and Animal Protection (NASCAP), P.O. Box 3129, Bethlehem, Pa. 18017. Purpose is to defend sport hunting in the courts.

- The American Archery Council (AAC) also has a bowhunter defense program. For details, and contributions, write to the AAC, c/o Sporting Goods Manufacturers Association, 705 Merchandise Mart, Chicago, Ill. 60654.

- The National Field Archery Associ-

ation, Rt. 2, Box 514, Redlands, Cal. 92373 has a bowhunter defense fund and a bowhunter education program.

- The National Rifle Association, 1600 Rhode Island Ave., N.W., Washington, D.C. 20036 has become very active in cooperative work with bow-hunting groups.

- The "Bowhunters Who Care" program of Saunders Archery Co., Columbus, Neb. 68601. This program is aimed primarily at giving financial assistance to legal actions for sport hunting and to developing consistently high standards of sportsmanship among all bowhunters.

- The Fred Bear Sports Club already is active in this arena. Fred Bear has been a vocal leader in the explanation and defense of sport hunting programs. You can get information about their efforts by writing to Bear Archery, Grayling, Mich. 49738.

With this many groups active, natural questions are: "How can the best use of my efforts and contributions come about? Will efforts on so many fronts dilute the financial and manpower resources? Will they fight each other to try to attain internal supremacy? How will they be unified?"

Fortunately, they all appear generally to be working toward common goals, so there may not be cause for worry. The main thing you can do is get active in something. Work, contribute, become informed. Help wherever you can, and educate the non-hunting public to the true value of sport hunting.

You can also write thoughtful, carefully composed letters of objection to main offices of companies which actively or tacitly support anti-hunting measures and to the news media which present anti-hunting programs. Avoid emotionalism and tell them why you object to the specific issue about which you are writing.

Write to your representatives and senators, and to the Federal Communications Commission, when you believe that the media has violated the fairness doctrine in the presentation of any program. You always should write to your elected representatives on major hunting issues of concern, which are being considered for legislative action; they are your elected servants.



BOW REPORT-BEAR ALASKAN

TECHNICAL DATA-BEAR ALASKAN

Manufacturer: Bear Archery Co. Grayling, Mich. 49738
Model Name: Alaskan
Suggested retail price: \$250.00
Length: 50", axle to axle
Draw weights: 35-70 lbs., 5-lb. increments
Eccentric sizes, draw length limits: 1-3/8" wheel - 26-27"; 1 1/2" - 26 1/2"-28"; 1-5/8" - 27 1/4"-28 3/4"; 1 3/4" - 28 1/2"-29 1/2"; 1-7/8" - 29 1/4"-30 1/4"; 2" - 29 3/4"-30 3/4"; 2 1/4" - 31-32 1/2"; 2 1/2" - 32 1/4"-33 3/4"
Sight window length: 5 1/4" shootable
Amount of centershot: 23/64" past center
Handle, limb material: Magnesium alloy handle, limbs Fascol® and Bearglas® laminated
Mass weight: Approx. 3 lb., 10 oz.
Wheel bearings: Needle bearings, each eccentric
String strands: Dacron, 12-16; Kevlar 16-20 Brownell 7-11
Draw weight adjustment: Recessed front weight adjustment, stainless steel bushings for non-corrosive steel to steel fine tuning 3/8"
Cable clearance: 9 1/2"-10 1/4"
Measured brace height: 9 1/2"-10 1/4"
Arrow rest: Bristle rest standard, others available
Special fittings: Drilled and tapped for cushion plunger, stabilizer, bowfishing rig, bow quiver. Also has routed handle for built-in bowsight
Handle style: Interchangeable grips, standard grip from factory, high and medium options
Standard equipment: String, cable adjustable nylon arrow plate, micrometer adjustment click tuning
Limb width: 1 3/4"
Finish: Handle electrostatically applied powder paint; limbs infrared cured polyurethane
Guarantee: Full 9-month warranty, additional variable period limited warranty thereafter up to 36 months.



THE VICTOR BEAR Alaskan is a conventionally rigged four-wheel compound with a number of interesting design features plus a relatively low mass weight of about 3-5/8 pounds. This alone should draw the interest of compound bowhunters, particularly those who favor a well-filled bow quiver.

The light weight in hand is due

TEST: Aluminum arrows, 3-fletched, half with 4 1/2" vanes, half with 5" feathers, fletched straight with 2° offset, 125-grain field points. Velocity read over 3-foot span directly in front of bow, average reading of 3 or more shots. Test shooting, 28-inch draw length.

Archery World bow reports are produced by **Norb Mullaney**, a mechanical engineer with work experience in structures, mechanisms, energy absorption systems and fiberglass reinforced plastics. He has also done research in wood characteristics and timber mechanics.

He has designed, built and experimented with bows and related equipment for the past 10 years, working exclusively in compound bows since 1969.

primarily to the use of a magnesium alloy handle-riser similar to those previously introduced on the Victor metal handled takedown recurves. The Alaskan handle accepts the replaceable vinyl low, medium and high pistol grips that are standard on Bear metal handled bows.

Much of what distinguishes the Alaskan from other four-wheelers is centered in the area where the limbs are mounted to the handle riser. A transverse semi-cylindrical bearing is used to pivot the butts of the limbs for weight adjustment. The male cylindrical portion is an integral part of the handle riser, and with the single stamping that provides the side plates forms the weight adjustment yoke which receives the limb.

The limb butt is fitted with two light metal die castings, one called the "limb base pivot" which is fastened by three screws to the face side of the limb butt. The limb base pivot contains a socket to match the semi-cylindrical projection on the handle riser. The ratchet cable adjustment mechanism is cleverly incorporated into the casting structure. In this manner the entire compounding system, including cable adjustment, is limb mounted, greatly simplifying takedown when desired. The ratchet is mounted in flanged nylon bearings, certainly an engineering plus.

Most compound bows that offer draw weight adjustment have the butts of the limbs through-drilled or slotted to accept

the weight adjustment bolts. Good practice then dictates that spherical or equalizing washers be used under the bolt heads to equally distribute the bearing load on the back surface of the limb. Bear uses a different approach on the Alaskan and Tamerlane II bows. The butt of the limb has a U slot at the end. The slot accepts a special slotted die-cast fitting which is adhesive bonded in place and rests under the head of the limb adjustment bolt and washer set, so that it is very easy to remove the bolt to disassemble the limb. This is a very desirable convenience for the traveling bowhunter who wants to take down his equipment for best packaging. Included in the washer set are a special weight adjustment support washer and bearing which mate with the ledge surface in the limb butt fitting to provide for distributed bearing load and to allow the small sliding motion necessary for limb adjustment. As an added bonus, this arrangement permits the use of shorter limb adjustment bolts for net weight saving, and it allows the bolt heads to be recessed for better appearance.

This arrangement does have one disadvantage—it locates the cable anchor position close to the limb butt and thus increases the cable angle across the mid-limb idler pulley. This generally increases friction in the compounding system. Friction should be held to a minimum for maximum bow efficiency.

Limb design on the Alaskan is not the conventional straight-limb, constant width construction found on many compounds. Two tapered laminations are used with gray glass. The planform, or outline, is necked toward the butt to permit a narrower limb mounting, and slightly tapered toward the tip. The limb is curved toward the face and has a slight recurve in the last few inches of the tip. The slot is short, with a large radius at the bottom of the slot. The curved limb permits this without cable interference, and limb tip stability is thereby enhanced because of the shorter slot. (A longer slot would allow more opportunity for tip twisting.)

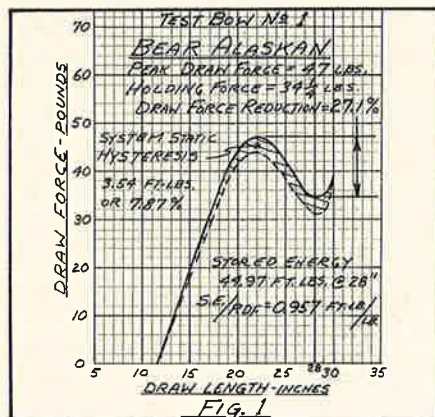
The idler mounting hardware is die cast with the exception of the swing bracket which is a steel stamping. All hardware is finished in a fine non-reflecting gray-black coating.

The eccentrics are embossed with raised markings to facilitate tuning and draw length adjustment. Dual anti-friction bearings (needle type) are used with each eccentric. The spacers, which position the eccentric laterally in the limb tip slot, are an integral part of the eccentric proper, thus permitting the dual bearings a wider span for greater stability, lower bearing stress and less bending stress in the axle. Plastic thrust washers between the eccentric and tip extensions complete the bearing assembly. This is very good engineering design and certainly worthy of special note.

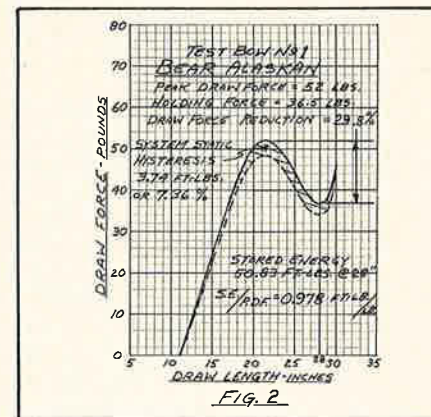
The manufacturer offers eight eccen-

COMPARATIVE TEST DATA-BEAR ALASKAN

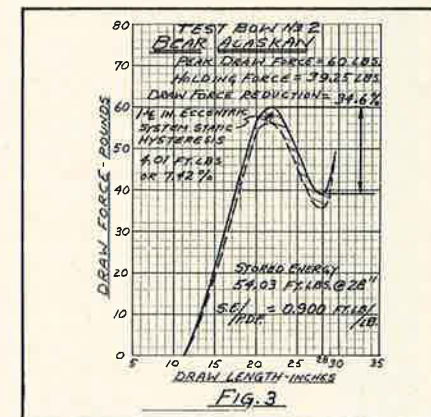
| TEST BOW No | 1 | 1 | 1 | 2 | 2 |
|---------------------------------------|---------|--------|--------|--------|--------|
| ECCEN. SIZE IN. DIA. | 1 3/4 | 1 3/4 | 1 3/4 | 1 1/2 | 1 1/2 |
| BRACE HEIGHT INCHES | 9 15/16 | 10 1/8 | 9 3/4 | 10 3/8 | 10 1/8 |
| DRAW LENGTH INCHES | 28 | 28 | 28 | 28 | 28 |
| PEAK DRAW FORCE - LBS. | 42 | 47 | 52 | 52 | 60 |
| HOLDING FORCE - LBS. | 31 | 34 1/4 | 36 1/2 | 35 | 39 1/4 |
| REDUCTION IN DRAW FORCE - % | 26.2 | 27.1 | 29.8 | 32.7 | 34.6 |
| STORED ENERGY - FT. LBS. | 41.62 | 44.97 | 50.83 | 46.37 | 54.03 |
| S.E./P.D.F. FT. LBS./LB. | 0.991 | 0.957 | 0.978 | 0.892 | 0.900 |
| STATIC HYSTERESIS - FT. LBS. | 3.35 | 3.54 | 3.74 | 3.45 | 4.01 |
| STATIC HYSTERESIS % OF S.E. | 8.05 | 7.87 | 7.36 | 7.44 | 7.42 |
| AVG. VIRTUAL MASS - GRAINS | 165.9 | 161.0 | 175.3 | 161.4 | 164.9 |
| CABLE CLEARANCE @ BRACE HGT. - INCHES | 5/16 | 5/16 | 5/16 | 7/16 | 7/16 |



●The bow set at 47 pounds stores 44.97 foot-pounds of energy at 28 inches, which is 0.957 foot-pounds for every pound of peak draw force. Dropoff is 27.1%.



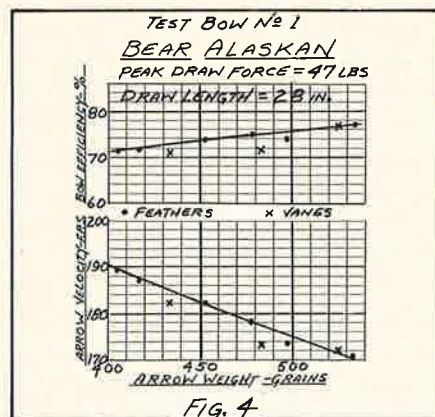
●The bow set at 52 pounds, with 1 1/4-inch eccentric, stores 50.83 foot-pounds of energy at 28 inches, which is 0.978 foot-pounds per pound of peak draw force. Dropoff is 29.8%.



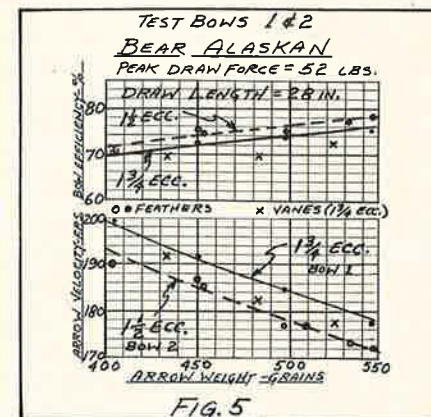
●The bow set at 60 pounds stores 54.03 foot-pounds of energy at 28 inches, which is 0.900 foot-pounds per each pound of peak draw force. Dropoff is 34.6%.

●Force-draw curves: The area under the solid-line curve down to the horizontal base line represents the work necessary to draw the bow. This becomes stored energy. If you would like to roughly check the values given, read the draw force for each inch of draw length, then total these values in pounds from the point where the curve begins (zero intercept) to the stated draw length. As example, Fig. 2 shows 31 pounds at 16 inches of draw, 37 pounds at 18 inches, etc. Divide

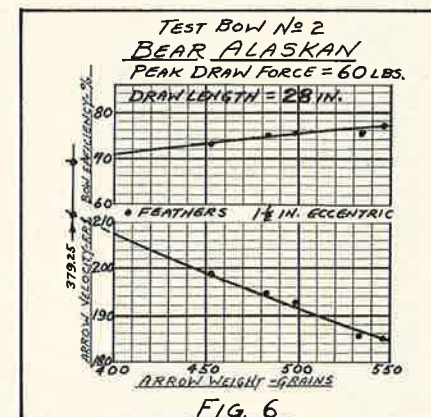
the total by 12; this gives you foot-pounds of stored energy. The higher the Stored Energy over Peak Draw Force (S.E./P.D.F.) ratio, theoretically the more efficient the bow, all other factors equal. System static hysteresis is the stored energy lost to friction in the compound system. Less energy is lost during shot than draw because more speed has less friction. Values shown here were made during draw.



●Test data showing variation of arrow velocity and bow efficiency with arrow weight. Note that as arrow weight increases, the velocity decreases but bow efficiency rises in the range of arrow sizes best matched to the bow. This is because the heavier arrow absorbs more



energy, and less energy is thus dissipated in vibration during the bow's recovery. Note in Fig. 5 that a larger eccentric is less efficient but helps shoot a faster arrow from bows of the same weight. The explanation for this is given in the text.





National Archery Association of the United States
1951 Geraldson Dr.
Lancaster, Pa. 17601
(AC 717) 569-6900

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QUALIFYING TOURNAMENTS

The last day to establish qualifying scores for the Olympic Trials and the Championship of the Americas will be May 16. To participate in the Olympic Trials, men will have to have registered four Single FITA scores of 1100 or better and women four scores of 1050 or better. Final notification to the NAA must be in a letter postmarked on or before May 17.

Round shot is the Single Outdoor FITA, open to any NAA member. *You must register before the tournaments*; no registrations will be accepted the day of the event.

You need to post only one qualifying score to qualify for the Championship of the Americas Trials.

The 1976 U.S. Olympic Trials and the 1976 Championship of the Americas Trials will both be held June 16-19 at Cook Field, Miami University, Oxford, Ohio. The Olympic Trials will be held over four days. The Championship of the Americas Trials will be June 16-17.

Archers who have posted four qualifying scores may participate in both trials, or one or the other. The choice is yours. Archers who have posted fewer than four qualifying scores can participate in the Championship of the Americas Trials only. The fee to participate in the Championship of the Americas Trials is \$35 per archer.

Applications will be mailed to all who qualify. Individual applications to participate in either one of these events must be completed and mailed to the NAA office, 1951 Geraldson Dr., Lancaster, Pa. 17601. There will be separate applications for each event.

The remaining qualifying tournaments:

April 3—Arizona State Archery Association, Phoenix, Judi Plants, 1727 W. Verde Lane, Phoenix, Az. 85015.

April 7—Minnesota University Archers, Tom Lund, 614 W. Park Valley Dr., Hopkins, Minn. 55343.

April 11—Long Beach Archers, Robert Neill, 4932 Verdura, Lakewood, Cal. 90712.

May 1—New Orleans Archery Club, Gene Thorpe, 230 S. Broad St., New Orleans, La. 70119.

May 1—Cape May County Archery Association, Rhonda M. Will, Box 456, R.D. 1, Cape May, N.J. 08204.

May 1—Madison College, Harrisonburg, Va., Mrs. Margaret Horn, Women's PE Department, Madison College, Harrisonburg, Va. 22801.

May 2—Oriole Archers, Baltimore, Bill Stump, Beaver Dam Rd., Cockeysville, Md. 21030.

May 8-9—State Archers of California, Karl Radde, 445 South Del Sol Lane, Diamond Bar, Cal. 91765.

May 8-9—St. Louis Archery Club, Senda Roff, 4223 Hunt Ave., St. Louis, Mo. 63110.

May 16—Pheasdale Archers, Harold Kremer, 1214 Lindsay Lane, Rydale, Pa. 19046.

May 16—Target Archers of North Carolina, Ronald Arthur, R.D. 14, Box 622, Charlotte, N.C. 28208.

NAA NOMINATING COMMITTEE

C.R. "Bud" Fowkes, Verona, Pa., has been named chairman of the NAA nominating committee, with Gene Thorpe, New Orleans, La., and Gretchen James, Phoenix, Az., committee members.

They are to nominate a slate of two people from each region for election of one from each region to the NAA board of governors. Their nominations must be in the NAA secretary's hands at least 30 days before the 1976 annual meeting, which will be Aug. 6. Persons interested in serving a three-year directorship must indicate they are willing to serve and that they will carry out all the duties of a board member.

Persons not nominated by the committee, but who wish to run for a position on the board, may be nominated by petition. Such a petition must have the signatures of any five NAA members and must be in the NAA secretary's hands 30 days before the annual meeting.

If you wish to nominate anyone, contact Fowkes at 904 Seventh St., Verona, Pa. 15147.

STAR TOURNAMENTS

Here's the list of Star Tournaments for the summer. The first is an indoor, all the rest are outdoor.

April 3—FITA II U.S. Indoor, Harrisburg, Pa.

May 8—State Archers of California, Long Beach

May 8-9—Arizona State Archery Association, Phoenix

May 16—Target Archers of North Carolina, Charlotte

May 29—Southern Archery Association, Daytona Beach

June 16-19—Olympic Trials, Oxford, Ohio

June 26—Midwestern Archery Association, Mt. Horeb, Wis.

June 29—Eastern Archery Association, New Brunswick, N.J.

July 10—N.Y. State Archery Association, Albany

July 17—Michigan Archery Association, Jackson

July 31—Pennsylvania State Archery Ass'n., State College

Aug. 2—Pheasdale Archery Club, Lansdale, Pa.

Aug. 4-7—NAA Championships, Valley Forge, Pa.

Aug. 14-15—Wildlife Archers of Washington, Seattle

Sept. 25—State Archers of California, Sacramento

NAA BOARD ACTION

The NAA's appointed fact finding committee, in regard to the ethics complaint against John Williams, Kenzie Williams, Luann Ryon, Don Rabska and Dan Tone filed by Lorraine Pszczola, reported to the full NAA board of governors at their January meeting in Phoenix that, based on all available information, there were varying degrees of fault on the part of all parties concerned, and they made the following recommendations, which were approved by the board:

"There are two problems involved. The first belongs to the local organization (college), and the second belongs to the NAA.

"1. The problem which belongs to the college is the conduct of its college program which includes such things as financing, selection of coaches, provision for and use of facilities, control of activities including participants and spectators, etc. The NAA has no jurisdiction over the college in these matters.

"2. The problem which belongs to the NAA is that of participation in the qualifying tournaments. The NAA rules are not specific relative to this matter. It is the decision of the NAA Board that 'any qualifier meet sanctioned by the NAA should be open first to the sponsoring organization and then to as many other members of the NAA as may be accommodated on a first come, first served basis.'

The Fact Finding Committee could find no specific evidence of violations of its rules or regulations, so the board of governors did not give any individual discipline. They indicated great concern and strongly recommended that all parties named in the complaint stay away from all college archery activities until June 30, 1975, "thereby evidencing their true desire to help all wounds heal."

92nd ANNUAL ARCHERY CHAMPIONSHIPS

The 92nd NAA Archery Championships will be held August 4-7 at Valley Forge State Park, Valley Forge, Pa. Official headquarters for the tournament will be Ursinus College, Collegeville, Pa. 19426. Tournament registrants may use the college dorms. Single room rates are \$8.50 per night per person. Double rates are \$6.50 per night per person. These prices include breakfast. Self-contained camping vehicles may use the campus; fee is \$3 per vehicle per night. This covers the use of showers and restrooms, but does not provide utilities.

The college's Elliott Pool will be open at regular hours, fee of \$1 per person per visit. All arrivals and departures must be between 9 a.m. and 4 p.m. when the staff is on duty.

Reservations are to be mailed to Ursinus College, c/o Summer Program Office, Collegeville, Pa. Many other motels and hotels are in the vicinity. However, the anticipated Bicentennial visitor attendance in this area will place accommodations at a premium. If you plan to stay in a hotel or motel here, get on it. There are no room guarantees by the NAA.

Inspection of equipment and practice will be August 3. Official ceremonies will be 6-6:30 p.m. on the archery field at Valley Forge State Park.

For a program and application to participate, write to the NAA, 1951 Geraldson Dr., Lancaster, Pa. 17601.

1975 TARGET AND FIELD RANKINGS

1975 target and field rankings through the first ten places are listed below. William Stump, rankings committee chairman, reports greater participation than ever before. In target, 48 men were ranked through 31 places and 40 women through 30 places; 42 field archers were ranked. Twenty states were represented.

A number of relatively minor changes have been made in the rankings rules, and these will be explained in the July issue.

For a copy of the complete rankings list, send \$1 to cover photocopying and postage costs, to William Stump, Beaver Dam Road, Cockeysville, Md. 21030.

Pace racked up 45 points to lead the men. Total points for Linda Myers were 36.

MEN—TARGET

1. Darrell Pace
2. Richard McKinney
3. Ed Eliason
4. Doug Brothers
5. Rodney Baston
6. Mike Gerard
7. Glenn Daily
8. Joel Lecker
9. Gary Riley
10. Allen Muller

7. Joel Lecker

8. Kevin Kolak
9. Chuck Downey
10. Wayne Faul
- Bob Lane

WOMEN—FIELD, FS

1. Ruth Wallace
2. Winnie Eicher
3. Martha Smith
4. Rae Dabelow
5. Louise Grondin
6. Kathleen Grondin
7. Dorothy Weldon
8. Betty Riggelman
9. Teresa Brothers
10. Katherine Sarver
- Colleen Yonda

WOMEN—TARGET

1. Linda Myers
2. Irene Lorensen
3. Doreen Wilber
4. June Mitchell
5. Vicki Cook
6. Judy Parnham
7. Cindy Thompson
8. Pat O'Callaghan
9. Sandra Van Kilsdonk
10. Katherine Sarver

MEN—FIELD, BB

1. Franklin Ditzler
2. Bob Hoke
3. Larry Ream
4. Tom Fox
5. Kermit Kemmerer

MEN—FIELD, FS

1. Doug Brothers
2. Darrell Pace
3. Richard McKinney
4. Larry Smith
5. Rick Stonebreaker
6. Rod Hoover

WOMEN—FIELD, BB

1. Eunice Schewe
2. Rebecca Wallace
3. Nedle Moritz
4. Karen Ramsey
5. Lee Richardson

SEVENTH ARIZONA INTERCOLLEGIATE INDOOR

Arizona State University, Tempe, reports eight new records set at their Seventh Indoor Intercollegiate Archery Meet, February 14.

Coling Bosch, PC, first in the men's division, set two records, shooting 274-279 (record)/553 (record). Second through tenth positions were taken by: Barry Wilson, GCC, 271-262/533; David Cannella, ASU, 268-263/531; John Bombardier, GCC, 267-253/530; Chris Wilson, ASU, 279 (record)-248/527; David Lindeman, ASU, 265-259/524; Jim Florence, GCC, 270-249/519; David Sanaski, GCC, 253-240/493; Tom Sugar, ASU, 239-247/486; Robinson Mitchell, NCC, 241-244/485.

Jean Stephenson, ASU, placed first in the women's division, also setting two new records with scores of 270-280 (record)/550 (record). The next nine places were taken by: Lynette Edwards, GCC, 274-273/547; Sandi Van Kilsdonk, ASU, 269-269/538; Sheri Torrence, ASU, 277-260/537; Wendy McLean, ASU, 258-270/528; Terri Hagemeyer, ASU, 263-260/523; Gigi Adams, GCC, 260-246/506; Wendy Vance, ASU, 249-256/505; Ann Kilby, ASU, 236-243/479; Liesel Roberts, GCC, 240-235/475.

Arizona State took first in the women's, men's and mixed team contests, scoring 1598 in the women's (Van Kilsdonk, 538; Torrence 537; Hagemeyer 523); 1582 in the men's (Cannella 531; C. Wilson 527; Lindeman 524); and 2133 in

mixed (Van Kilsdonk 538; Torrence 537; Cannella 531; C. Wilson 527)

Arizona's team points for all three divisions broke previous tournament records.

CERTIFIED INSTRUCTOR COURSES

The NAA will have eight Certified Instructor courses around the country this summer. Here are the dates, locations, and names of persons to contact at each site. In addition, the NAA office has circulars on each camp. Write to the NAA, 1951 Geraldson Dr., Lancaster, Pa. 17601 for full details.

May 29-June 6—Middle Tennessee State University, Murfreesboro, Tenn., Dr. Ralph Ballou.

June 5-13—University of Texas, Austin, Maxine Beardsley, Women's Physical Education Department.

June 12-19—Luther College, Decorah, Iowa, Betty Hoff.

June 12-19—Shoreline Community College, Seattle, Washington, Dwight Nyquist.

June 13-25—The World Archery Center, Pocono Sports Center, Marshalls Creek, Pa., Myrtle Miller.

June 19-26—San Bernardino Valley College, San Bernardino, California, Lorraine Pszczola.

Aug. 7-15—Ursinus College, Collegeville, Pa., Clayton Shenk at NAA office.

Aug. 27-Sept. 3—Betsy Jeff Tennessee 4-H Camp, Raleigh, N.C., Edward Jones.

FIRST AMERICAN INDIAN CHAMPIONSHIPS

The first American Indian Archery Championships, open to persons from North, Central and South America, will be held May 28-31 at Navaho Community College (NCC), Tsaile, Arizona. Competition is open to men and women, freestyle and barebow. The International 25-meter and 18-meter rounds will be shot, plus an NCC Hunter's Round.

For full information, contact Evan Oswald at Navaho Community College.

BALTIMORE OLYMPIC QUALIFIER

If you need one more score to qualify for June's Olympic trials, one of your last chances is Sunday, May 2, when Baltimore Oriole Archers host a sanctioned qualifier. The single FITA begins at 9:30 at Friends School in Baltimore. For a map, write to William Stump, Beaver Dam Rd., Cockeysville, Md. 21030, or call him at 301-666-2566.

Qualifying scores shot at the Orioles event also count toward eligibility for the tryouts preceding the 1977 World Championships in Australia.

NAA FLIGHT CHAMPIONSHIPS

The 1976 Flight Championships will be held September 11-12 at the Bonneville Flight Range, adjacent to the Bonneville Speedway near Wendover, Utah.

In addition to regular flight events, the flight committee has scheduled events on September 12 for the unlimited compound bow regular flight, 80-pound and unlimited conventional bow broadhead flight and 80-pound and unlimited compound bow broadhead flight. Broadhead flight shooting is restricted to men, women and intermediate boys and girls. Regular flight divisions are open to all age groups. Contestants must have a valid NAA membership card in their possession. Membership application forms will be available at the tournament.

FLORIDA BICENTENNIAL FESTIVAL

The Florida Bicentennial Archery Festival will be held over the Memorial Day weekend, May 29-30, at the Daytona International Speedway, Daytona, Florida.

Target competition will feature the 1976 state tournaments of the Florida Archery Association (NFAA) and the Florida State Archers (NAA). The competition will also include the prestigious "Southern" archery tournament and a FITA Star. Each tournament will be conducted under its own association's rules. Participation will be limited to pre-registrants, with a maximum of 300 archers shooting at 75 targets.

The tournament banquet will be Saturday evening, May 29, at the Festival headquarters, the American Beach Lodge. Special bicentennial trophies and medals will be awarded.

For further information, contact Chairman Joel Sayers, 1812 N. Atlantic Ave., Daytona Beach 32018 or Co-Chairman Earl Willauer, 132 Coral Circle, South Daytona, Florida 32019.

RECORDS SET AT ARIZONA INVITATIONAL

Several new tournament records were set at the Arizona Indoor Invitational Archery Meet, at Arizona State University in Tempe, February 7 and 8. They shot the Indoor FITA, 18 meters.

Carol Jurn, Buckeye, Az., set three new records in the amateur women class, shooting 559-561/1120. The 561 double and 1120 total were event records. Her 284 single was also a tourney record. She was followed by Diane Tone, Mesa, Az., 540-553/1093; and Sue Vancas, San Manuel, Az., 548-522/1070.

Mark Vancas, San Manuel, Az., led the amateur men with scores of 556-555/1111. David Convery, Phoenix, Az., and John Mikell, Oracle, Az., followed him with scores of 531-514/1045 and 463-497/960 respectively.

Kay Sarver, Phoenix, Az., set two records as top scorer for the professional women, with 513-531 (record)/1044 (record). Second and third place scorers were Marion Rhondes, Glendale, Az., 496-495/991; and Maureen Edwards, Glendale, Az., 488-465/953.

Top three scorers for professional men were: Arty Daubenspeck, Phoenix, Az., 553-553/1106; Dick Tone, Mesa, Az., 552-551/1103; and Johnny Santangelo, Tucson, Az., 531-532/1063.

Marty Sliwinski, Phoenix, Az., set two records for intermediate boys with scores of 554-559 (record)/1113 (record). He was followed by Rodger Jones, Scottsdale, Az., 295-271/566.

Intermediate girls' top scorers were: Carole Cheuvront, Phoenix, Az., 533-525/1058; Patti Iske, Phoenix, Az., 526-527/1053; and Judi Adams, Phoenix, Az., 508-517/1025.

Glen Feldhuhn led junior boys with scores of 463-454/917, followed by Robert Metzner, Phoenix, Az., 448-465/913 and Mike Allegretto, Phoenix, Az., 478-302/880.

Terri Pesho, Phoenix, Az., setting three new records, was top scorer for junior girls, with 508-524 (record)/1032 (record). Suzi Ziegler, Phoenix, Az., was second with 494-521/1015. Patty McMinds, Phoenix, Az., came in third with 433-438/869.

In the college men class, Colin Bosch, PC, set three new records, scoring 557-561 (record)/1118 (record). He was followed by Barry Wilson, GCC, 511-546/1057; and Jim Florence, GCC, 518-534/1052.

Top college women scorers included Lynette Edwards, GCC, who set two new records with 546 (record)-544/1090 (record). Sandi Van Kilsdonk, ASU, followed with 519-534/1053. Wendy Vance, ASU, took third, with scores of 533-516/1049.

9th U.S. FIELD ARCHERY CHAMPIONSHIPS

The 9th U.S. Field Archery Championships will be held June 26-27 at Miami University, Oxford, Ohio. International Field Archery rules are used, which means the distances for the 28 hunter targets will be unmarked, but for the 28 field targets will be marked. Competition is men and women, amateurs and pros, plus intermediates. Scores recorded here may be used as qualifying scores for the U.S. Field Archery Trials, which will be held in August.

FITA AMENDMENTS TO RULES [cont. from Feb./March]

408
IOC 26
ELIGIBILITY CODE

To be eligible for participation in the Olympic Games a competitor must:
A - observe and abide by the Rules and Regulations of the I.O.C. and in addition the Rules and Regulations of his or her International Federation, as approved by the I.O.C., even if the federation rules are more strict than those of the I.O.C.
B - not have received any financial rewards or material benefit in connection with his or her sports participation, except as permitted in the bye-laws to this rule.

BYE-LAWS TO RULE 26

- A - a competitor may:
1. Be a physical education or sports teacher who gives elementary instruction.
 2. Accept, during the period of preparation and actual competition which shall be limited by the rules of each International Federation:
 - a) Assistance administered through his or her National Olympic Committee or National Federation for:
 - Food and lodging. Cost of transport.
 - Pocket money to cover incidental expenses.
 - Insurance cover in respect of accidents, illness, personal property and disability.
 - Personal sports equipment and clothing.
 - b) Compensation, authorized by his or her National Olympic Committee or National Federation, in case of necessity, to cover financial loss resulting from his or her absence from work or basic occupation, on account of preparation for, or participation in the Olympic Games and international sports competitions. In no circumstances shall payment made under this provision exceed the sum which the competitor would have earned in the same periods. The compensation may be paid with the approval of the National Federations or the National Olympic Committees at their discretion.
 3. Accept prizes won in competition within the limits of the rules established by the respective International Federations.
 4. Accept academic and technical scholarships.
- B - a competitor must not:
1. Be or have been a professional athlete in any sport, or contracted to be so before the official closing of the Games.
 2. Have allowed his person, name, picture or sports performance to be used for advertising, except when his or her International Federation, National Olympic Committee or National Federation enters into contract for sponsorship or equipment.
- All payments must be made to the International Federation, National Olympic Committee or National Federation concerned, and not to the individual.
3. Carry advertising material on his person or clothing in the Olympic Games, World or Continental Championships and Games under patronage of the I.O.C., other than trade marks on technical equipment or clothing as agreed by the I.O.C. with the International Federations.
 4. Have acted as a professional coach or trainer in any sport.

C - Eligibility commission
A commission may be appointed to enforce Rule 26 and these Bye-Laws.

409
IOC 27
MEDICAL CODE

- A - Doping is forbidden. The I.O.C. will prepare list of prohibited drugs.
B - All Olympic competitors are liable to medical control and examination, in conformity with the rules of the Medical Commission.
C - Any Olympic competitor refusing to take a doping test or who is found guilty of doping shall be eliminated. If the Olympic competitor belongs to a team, the match or competition in question shall be forfeited by that team. After the explanations of the team have been considered and the case discussed with the International Federation concerned, a team in which one or more members have been found guilty of doping may be disqualified from the Olympic Games.
In sports in which a team may no longer compete after a member has been disqualified, the remaining members may compete on an individual basis in agreement with the I.O.C.
D - Competitors in sports restricted to women must comply with the prescribed test for femininity.
E - A medal may be withdrawn by order of the Executive Board on a proposal of the Medical Commission.
F - A Medical Commission may be set up to implement these rules. Members of this commission may not act as Team Doctors.
G - The above regulations shall in no way affect further sanctions by the International Federations.

410
IOC 29
AGE LIMIT

No age limit for competitors in the Olympic Games is stipulated by the International Olympic Committee.

412 IOC 32 PARTICIPATION OF WOMEN

Women are allowed to compete in Archery, Athletics, Basketball, Canoeing, Diving, Equestrian Sports, Fencing, Gymnastics, Handball, Hockey, Luge, Rowing, Shooting, Figure and Speed Skating, Skiing, Swimming, Volleyball and Yachting, according to the rules of the International Federation concerned.

424
IOC 55
ADVERTISING, PROPAGANDA

Every kind of demonstration or propaganda, whether political, religious or racial, in the Olympic areas is forbidden.
Commercial installations and advertising signs shall not be permitted inside the stadium or other sports arenas. No commercial advertising is permitted on equipment used in the Games nor on the uniforms or numbers worn by contestants or officials, in fact nothing may be worn on the uniforms of contestants or officials except the flag or emblem of the National Olympic Committee, which must meet with the approval of the International Olympic Committee.
The display of any clothing or equipment such as shoes, skis, handbags, hats etc., marked conspicuously for advertising purposes in any Olympic venue (training grounds, Olympic Village or fields of competition), by participants either competitors, coaches, trainers or anyone else associated with an Olympic team in official capacity, will normally result in immediate disqualification or withdrawal of credentials.

PART VIII RULES OF SHOOTING FIELD ARCHERY

Article
805
FIELD COURSE LAYOUT

(d) The butts shall measure not less than 75 cm square and at no point may the faces be less than 15 cm from the ground. All butts must be placed so that the full face is exposed to the archer.

ARCHERS EQUIPMENT 808

- A - 1(b) & B - 1(b) A Bow String . . . The serving on the String must not end within the archers vision at full draw. The Bow String must not in any way offer aid in aiming . . .
A - 1(d) & B - 1(f) Arrows . . . Each arrow shall be numbered by the use of plainly visible rings of approximately 5 mm width and 5 mm spacing.
B - 1(i) Ordinary Spectacles . . . Field glasses and other visible aids may be used between shots for spotting arrows.
B - 2 The Following equipment is not permitted:
(a) Any aids for estimating distances
(b) Any memoranda that assist in improving scores.

SHOOTING 809
(f) iv Archers draw position and relationship of arrow to drawing fingers must not change.
(See Appendices, Part X, L.3)

TOURNAMENT RULES 811
(d) The official Field Course . . . Special practice Targets shall be made available elsewhere from the day before the Tournament and adjacent to the field course on the day of the Tournament.

Join The National Archery Association!

No matter what kind of archery you like best, you should join NAA! Its brand of shooting and its club activities are fun — and challenging! Besides, NAA works for the promotion of all archery, and your support means a lot. NAA represents all archery before the U.S. Olympic Committee and FITA, our sport's international federation. Another thing: NAA, founded in 1879, is tradition-laden. Yet, it's as modern as tomorrow. It's well organized, it's growing, it'll be more and more important to archery — and to you! — as time goes on. And here's something else, too.

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Individual membership, \$5 a year. Family membership, \$6 incl. husband, wife, \$1 more for under-18ers. \$4.00 for under-18ers who join independently of family. Of this fee, \$2.00 is for a one-year subscription to ARCHERY WORLD magazine.

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City _____ State _____ Zip _____

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\$ _____ Make checks payable to the National Archery Assn. Mail to NAA, 1951 Geraldson Dr., Lancaster, Pa. 17601.
Enclosed

We immediately turned the dogs out and it was a short chase of a quarter mile when they bayed whatever it was in the middle of a thick jungle of whitebrush.

We had crawled within 30 yards of the ruckus when we could make out the shapes of two large black sows the dogs had bayed. Even though these sows do not have the large curved tusks of the big boars, they are still plenty vicious and can administer a bad bite to either dogs or man in close quarters. Both of these sows were 200 to 250 pounds and were giving a good account of themselves with the dogs. Maurice's dogs are very well trained; it didn't take him long to call them off.

We had hunted several more days and had several encounters with more sows and small boars but couldn't seem to find the big one we were looking for. Maurice ran into a rancher who was familiar with his operation and asked Maurice if he would come down and try to catch a couple of big old boars that were leading a herd of hogs into his silage pit each night and doing extensive damage. We agreed to be down there the next afternoon after the heat of the day had lessened somewhat to allow the dogs better running conditions. We sat in the rancher's living room and talked hunting over a couple of cold beers until the time was right to go wild boar hunting.

The rancher knew the hogs were moving better than a mile from their brushy lay-up of the daytime to feed on his silage pits. We hoped to catch them in between, where the running and the country was much more conducive to baying them in the open than it would be in the dense thickets. We decided to let the dogs check a water tank where the hogs watered on the way. The dogs made several circles around the tank and then moved off as would be expected—into the heavy thicket of whitebrush. Much to our surprise, they immediately started baying and fighting a hog of unknown size in the middle of the thicket. The hog had not run at all, indicating it was probably a large boar who had just lain in his bed until the dogs got right on him and then started to fight.

These old boars have no natural enemies in the Texas brush and are the biggest, toughest things around and will not back up from anything, man or beast. This old boar was no exception. We could hear him snorting and grunting and chomping his jaws in the midst of the thicket.

The rancher and his boy, who was also an ardent bowhunter, and had yet to kill his first wild boar with a bow, decided to go around the back side of the thicket in hopes the boar would come that way if he broke and ran. Maurice and I bailed into the heavy brush and started breaking our way to the fight. The last 30 yards were almost impossible and again

we found ourselves on our hands and knees, crawling along the hog trails in hopes that the hog would not decide to come our way. We got within 30 feet of the fight and all we could see were shadows of dogs and the boar, fighting and raising hell in general. I was trying to work into a position where I could draw and possibly get off a shot when the fight ceased and the hog took off out of the thicket.

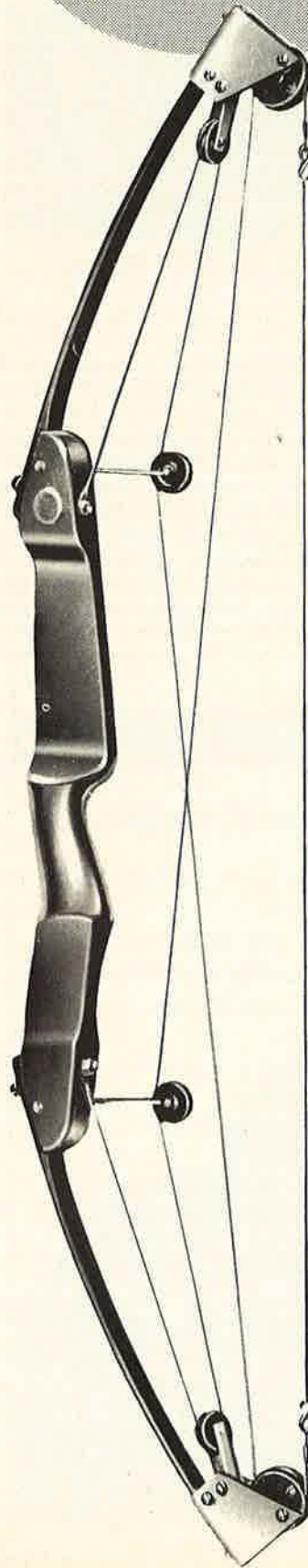
It was as much a chore for us to break our way out of the thicket as it was to get in. All this time we could hear the dogs baying the hog somewhere ahead of us. We broke into the open right on the edge of the tank and lo and behold, the dogs had bayed the hog in the water. He was giving a good account of himself in the water and the dogs were having a rough time of it as they had to swim, while the hog could still stand. There was no way of getting a shot and as we came into the open the hog saw us, whirled and started swimming. Maurice and I ran as fast as we could to the far side of the tank, where the hog would come out, and waited. The hog saw us and instead of turning the other way, turned and came right for us. Maurice hollered, "You better stick him good that first step out of the water, or we're going to end up climbing one of these thorn trees!" A proposition not at all to my liking, but I was sure that I would be better off doing that than standing my ground with a 350-pound hog.

MUST USE HEAVY TACKLE

The dogs were swimming along behind the hog but he had outdistanced them. He was focusing his full attention on us. The hog hit shallow water and without a second's loss started right for us, but at enough of an angle that I got a clean shot as he took a step forward. My arrow went in low behind the shoulder. The hog managed three full steps in our direction before he dropped.

The boar was in perfect condition and so fat he kept Maurice and me up until one o'clock that morning making sausage and pork chops out of him. I was amazed when we were skinning him to find that a boar has what is called a shield covering the shoulder, rib, heart and lung area, extending almost to the bottom of the chest. This shield is hide, gristle and fat that is almost two inches thick and tough as tanned boot leather. It takes a big, heavy bow and razor sharp arrows to drive through this shield and penetrate the vital area of one of these wild hogs. If you are contemplating a wild boar hunt, either in some of the good areas of the east coast, or in the south Texas brush country, make sure your equipment is up to it. And, if you should find yourself in a face to face encounter with one of these monsters of the past, in the brush, just take Maurice's advice and jump up and don't come down.

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good example of what can happen to a once-healthy herd. This bowhunters-only area once produced huge mule deer heads, but recent urban sprawl and recreational developments from the nearby city of Albuquerque have severely limited the winter range of the Sandia herd. As a result, herd numbers have dwindled sharply over the past five years and big heads are now rare. To take a trophy you've got to hunt where good feed is abundant.

There are places where animals are hunted so hard that the herds are kept young, but no animal reaches trophy proportions till it's in its prime. For example, northern California has a good-sized herd of mule deer, but the average buck in the herd is about three years old. There aren't many six and seven-year-old "mossbacks" running around to grace den walls. Bucks are cropped off before they can grow into giants. The trophy hunter must seek out areas that are lightly hunted; otherwise, he's stacking the odds against himself even if all other factors say there should be good heads around.

A final environment phenomenon which determines trophy size is summed up in a biological postulate called Bergmann's Law. This law states that the further animals of any kind live from the equator, the more massive their bodies are in relation to their weights. They get stockier. Bergmann's Law also states that the further away from the equator animals live, the shorter their body appendages become—ears, legs, tails, antlers, horns, etc. The closer animal populations get to the cold polar regions, the better insulated they must be to stay warm, and a long, slender body loses more heat than a close-coupled one. Even races of people conform to Bergmann's Law. Eskimos are built like fireplugs compared to South African natives.

Following Bergmann's Law, animals should be heavier-bodied and have smaller antlers and horns the farther they live



● This fine blacktail buck was taken by the author in California's Trinity-Salmon Primitive Area, an isolated bit of real estate that also has good feed.

north or south of the equator. This is generally true. Most mule deer in Alberta have extremely heavy bodies and smallish antlers; most Arizona mulies have lighter, lankier bodies and bigger antlers. The world's bears tend to get bigger-framed and bigger-skulled toward the poles. And in Alaska, Dall sheep in the northern Brooks Range have much smaller horns than those in southern Alaska's Chugach and Wrangell Mountains.

As you may be realizing, there are many factors that affect trophy size. One factor can be canceled out by another or several factors can combine to accentuate trophy growth. New Mexico's Jicarilla Apache Indian Reservation is a notable

example of several positive factors combining to create a trophy paradise. This small area has been the top producer of record mule deer heads in recent times. Why? Among other things it sits on almost solid limestone, it is relatively close to the equator, it is lightly hunted, and big bucks from southern Colorado and northern New Mexico are pushed into the Reservation each year by hunting pressure from the outside.

There's one more factor that must be added to this baffling puzzle—genetics. If animals don't have the genetic programming to become trophies, there's no way the environment can make them record-book contenders. For example, brown bears are among the top trophies sought by hunters in Alaska. Kodiak Island, just a few miles south of the mainland, has consistently produced the biggest-skulled bears—the important thing in record-book competition. But for some inexplicable reason, the bears on the mainland have bigger bodies on the average than the Kodiak bears, but *smaller* heads. The two bear populations are genetically different, and regardless of feed quality and other factors, Kodiak bears keep making record books while their husky mainland brothers usually fall short of the mark. Genetic peculiarities exist in big game populations all over the world. Another example is the difference in types of record heads produced in western and eastern Montana. Montana isn't noted for record mule deer, but a few are taken there. What's interesting is this: the western part of the state (Rocky Mountains) produces typical heads by and large, while the eastern portion of the state (Missouri River Breaks) is known for whopping non-typical heads. This is strictly a genetic phenomenon. Eastern Montana bucks are programmed to be "freaks" and western deer are not.

Confusing, you may say. You bet! The factors that make or break a trophy hunter's dreams are many, occur in a myriad of combinations, and constantly *change*. The area that produced a lot of record-book elk 15 years ago may be a dud now because of hunting pressure, shifts in forestry methods or subtle changes

in climate.

The puzzle is complicated, but don't despair. Once you know how complex this trophy-hunting business is you can cope with it. A trophy hunter doesn't have to be a biologist or an Einstein, but he's got to do his homework. He should be familiar with the general limestone areas on the continent. And he must keep in constant touch with the current record listings, both Pope and Young and Boone and Crockett, to see where records are being produced *now*. The world record that was arrowed 20 years ago means nothing. Where it was killed may now be a shopping center. Keep tabs on current record trends.

Write game department officials in states or provinces you wish to hunt for information on trophy-producing areas. These people are public servants, and the info you get from them will be accurate and current.

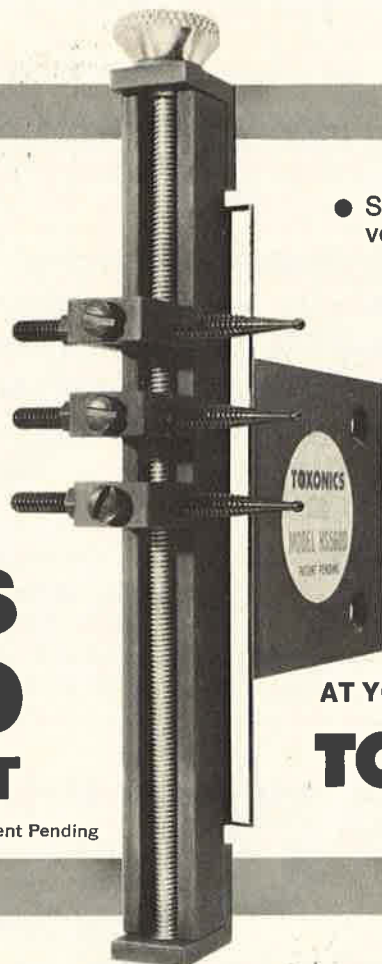
Once you've zeroed in on a general area that produces big antlers, horns or skulls, get a game department list of licensed outfitters in that area and write or phone a sample of these professionals. They'll be eager to tell you how many record heads they've guided hunters to recently. Get topographic maps and circle inaccessible spots within general trophy areas where an ol' granddaddy may be living out his life without seeing any hunters. Try to figure where game in trophy country might be pushed by hoards of opening-day nimrods. That one isolated canyon surrounded by roads could be the home of a huge buck that got that way by carefully avoiding hunters. Use your head and you'll find trophy game.

Trophy hunting isn't for everybody. Many bowhunters are happy with fat forked-horn bucks or juicy spike elk. But if you have a yen to take extra-nice game and maybe even "make the book," go about it scientifically. Otherwise you'll probably spin your wheels for years in the wrong areas and end up a frustrated, unfulfilled hunter like my friend in Pennsylvania. A lot of factors go into making a trophy animal—find an area where the factors are working for you, not against you!

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STONE AGE (continued from page 29)

wounded and runs to the left in an attempt to escape the hunters. Upside down above it is a smaller dead boar, and others in the herd have received arrows and lances in their backs. The bowmen are running at great speed, their legs open wide into a horizontal line to depict the characteristic "flying motion." To protect their legs as they run through the undergrowth they wear fringed gaiters suspended just below the knee. A large figure on the extreme left wears a horned headdress and, like the others, is carrying his bow in a horizontal position to keep it clear of the ground while running toward the escaping boar.

At top center is another figure. An archer with long strides is leaning forward while following the track of a wounded animal. The track exists only behind the hunter and not in front. The painter assumed quite naturally that it was not possible to anticipate the direction of the spoor—he was limited to painting only what the hunter had already seen!

Another painting shows a large, exceptionally well-drawn deer painted upside down to indicate that it is dead. Near it is a large figure of a man bent forward, either to examine the deer or about to execute a dance. Two more bowmen in protective clothing are behind him. In all cases the human figures are the same; the heads are quite small and the uppermost parts of their bodies consist of little more than single brush strokes. Yet the legs are shown in proportions much larger to indicate the main asset of a great hunter. This method of stylizing the human figure is a common occurrence in primitive and prehistoric art the world over. It was believed that to depict the human form in its natural proportions would expose the person's "soul" to harm and possible death.

A small painted cavity shows five bowmen marching along in unison. They hold their bows high above their heads and are no doubt twanging their bowstrings as they file along behind their leader, who wears a tall helmet and holds his bow in a more vertical position. (Following its invention as a hunting weapon, surely the bow became the very first stringed musical instrument?) The similarity of this detail with others I have recorded at sites as far apart as the Sahara and North America is most remarkable. In all areas, the "five bowmen" appear to have held great significance.

The painting that you see on page 28 shows a herd of ten deer being driven toward four waiting bowmen. The female deer is leading the herd, with the males taking up the rear. It is usual for males to adopt the most vulnerable position when danger threatens, so at first glance, this scene appears to be a contradiction to the rules. But we must remember that the bowmen had been waiting in ambush, while their active colleagues were positioned behind the stampeding herd, using fire and noise to frighten their quarry. Therefore, to the animals, the danger lay at the rear, not in front, and the male deer were perfectly positioned to protect the herd.

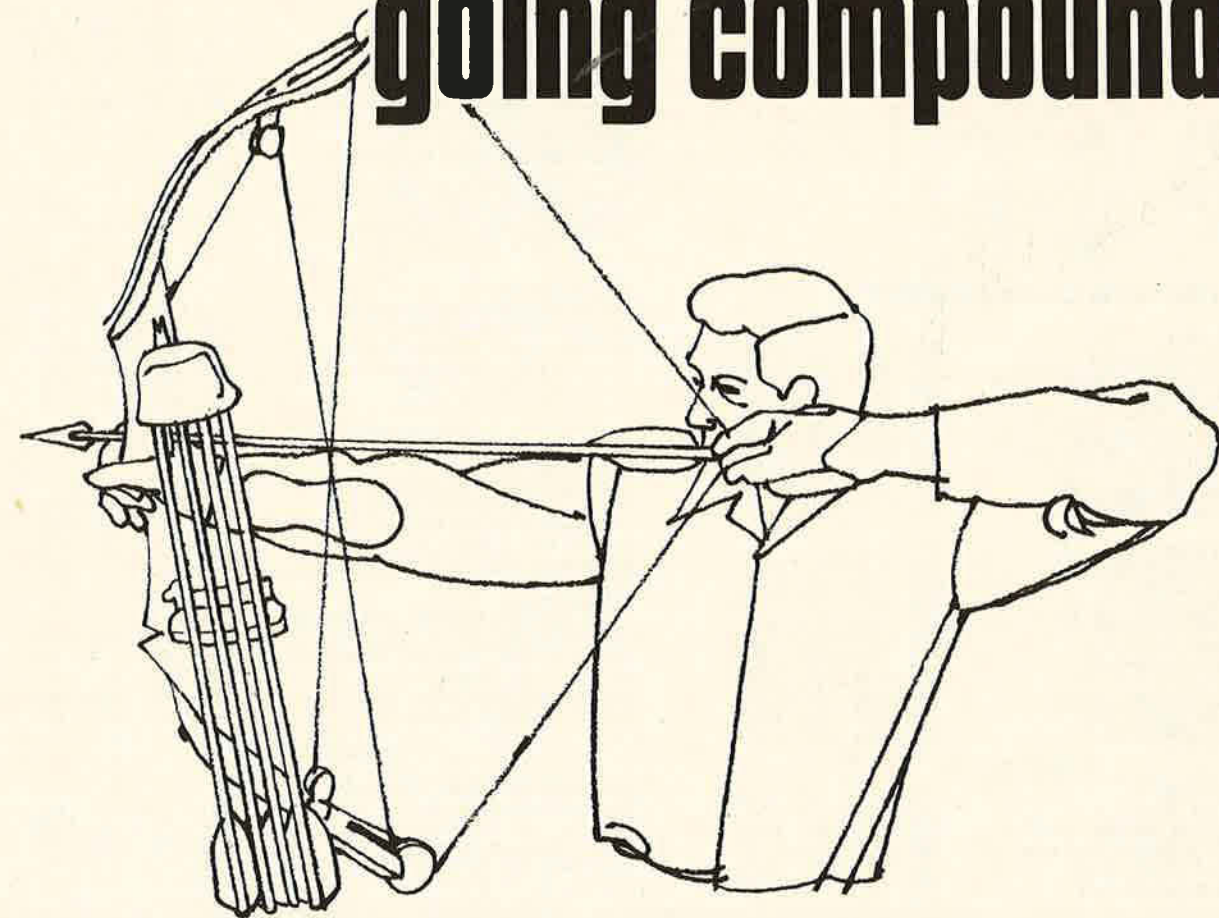
I have enjoyed long conversations about these paintings with modern deer hunters who never fail to be amazed at the artists' accuracy.

The search for prehistoric art has taken me to hundreds of sites in France, Spain, the Sahara Desert and, of course, through many of the painted and engraved canyons of North America, and this brief article can only touch lightly upon one aspect of a deeply interesting and fascinating subject. My book "Voices from the Stone Age" describes and illustrates in greater detail the many sites visited during the past fifteen years.

The painted walls, like clear voices, tell us the story of early man's struggle to survive. They speak of his inventive mind and his sensitivity, and they describe his blunders. Prominent in the story stands the man upon which so very much depended: the very lives of his children and neighbors, the supplier of meat, clothing and bone utensils—the bowhunter of the Stone Age.

Autographed copies of Voices From The Stone Age are available by sending \$13.50 to: Douglas Mazonowicz, Gallery of Prehistoric Paintings, 50 W 11th St., New York, N.Y. 10011. A catalogue of prehistoric art prints is also available.

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| Eliason, Ed, Seattle, Wash. | 432 | 422 | 282 | 1136 |
| Kozielski, Donald, Houston, Texas | 422 | 419 | 287 | 1128 |
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| Kukli, Robert, Chicago, Ill. | 426 | 424 | 275 | 1125 |
| Page, Scott, Fallbrook, Cal. | 423 | 412 | 283 | 1118 |
| Gamble, Ted, Calgary, Alberta, Can. | 420 | 419 | 277 | 1116 |
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| Lorensen, Irene, Phoenix, Az. | 415 | 409 | 276 | 1100 |
| Ryon, Luann, Riverside, Cal. | 410 | 400 | 279 | 1089 |
| VanKilsdonk, Sandy, Phoenix, Az. | 410 | 405 | 271 | 1086 |
| Hammer, Deborah, Colton, Cal. | 414 | 410 | 259 | 1083 |
| Edwards, Lynette, Phoenix, Az. | 414 | 407 | 260 | 1081 |
| Adams, Judi, Phoenix, Az. | 402 | 409 | 265 | 1076 |
| Silcocks, Marlene, Cerritos, Cal. | 385 | 402 | 261 | 1048 |
| Burkheimer, Jane, Covina, Cal. | 393 | 388 | 264 | 1045 |
| Swan, Robin, Rosemead, Cal. | 386 | 389 | 260 | 1035 |

FLIGHT A

| | | | | |
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| NAA AMATEUR MEN | | | | |
| Clague, Larry, Escondido, Cal. | 376 | 387 | 277 | 1040 |
| Snooks, Steve, Riverside, Cal. | 373 | 393 | 262 | 1028 |
| Seki, Masatoshi, Kakegawa-shi, Japan | 387 | 378 | 261 | 1026 |
| Sampier, Brent, Pinckney, Mich. | 382 | 380 | 263 | 1025 |
| Silcocks, William, Cerritos, Cal. | 386 | 377 | 261 | 1024 |

FLIGHT A

| | | | | |
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| NAA AMATEUR WOMEN | | | | |
| Ferrer, Robin, South Pasadena, Cal. | 391 | 290 | 258 | 939 |
| Gottlieb, Joan, Austin, Texas | 334 | 343 | 244 | 921 |
| Phillips, Denice, Seattle, Wash. | 337 | 345 | 237 | 919 |
| Morkert, Cindy, Los Alamitos, Cal. | 346 | 346 | 221 | 913 |
| Sandmann, Debbie, Los Alamitos, Cal. | 359 | 317 | 236 | 912 |

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| Thacker, Ann, Austin, Texas | 401 | 392 | 237 | 1030 |
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| Nielsen, Judy, Idaho Falls, Idaho | 394 | 403 | 259 | 1056 |
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FLIGHT 1

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| McGarry, John, New Orleans, La. | 418 | 398 | 283 | 1099 |
| Melish, Wayne, New York City, N.Y. | 417 | 411 | 263 | 1091 |
| Itow, Steve, San Juan Bautista, Cal. | 402 | 410 | 275 | 1087 |
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| Killian, Mitchel, Clackamas, Ore. | 558 | | |
| Sampier, Brent, Pinckney, Mich. | 557 | | |
| Cravens, Mark, Bonnelli, Terry, Ostebo, Mich. | 538 | | |

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|-------------------------------------|-----|--|--|
| INTERMEDIATE GIRL | | | |
| Adams, Judi, Phoenix, Az. | 565 | | |
| Doyle, Sherilyn, Taft, Cal. | 546 | | |
| Barnett, Frances, Rosemead, Cal. | 531 | | |
| Wallace, Roberta, Chula Vista, Cal. | 526 | | |
| Veylupet, Renee, San Gabriel, Cal. | 502 | | |

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| JUNIOR BOY | | | |
| Metzner, Bob, Phoenix, Az. | 515 | | |
| Whaley, Paul, Temple City, Cal. | 514 | | |
| Morrett, Kent, Fontana, Cal. | 503 | | |
| Skalbert, Mark, Phoenix Az. | 496 | | |
| Wanlass, Jeremii, Ammon, Idaho | 460 | | |

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|-----------------------------------|-----|--|--|
| CADET BOY | | | |
| Tahkofper, Richard, Arvada, Colo. | 485 | | |
| Ennis, Timothy, Glendora, Cal. | 320 | | |

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|----------------------------------|-----|--|--|
| CADET GIRL | | | |
| Pesho, Terri, Phoenix, Az. | 556 | | |
| Wallace, Rita, Chula Vista, Cal. | 503 | | |
| Tahkofper, Dereth, Arvada, Colo. | 449 | | |

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|---|------|-------|--|
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| California State University—L.A. | 3206 | \$500 | |
| University of Texas | 3126 | 300 | |
| Palomar College | 3104 | 200 | |
| COLLEGE WOMEN | | | |
| Glendale Community College—Arizona | 3040 | \$500 | |
| California State University—L.A. | 3023 | 300 | |
| Colorado Northwestern Community College | 2619 | 200 | |
| NAA AMATEUR MEN | | | |
| Canadian Rocky Mountain | 3264 | | |
| Minneapolis Archery Center | 3100 | | |
| NAA AMATEUR WOMEN | | | |
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| Astro Bows | 3527 | 200 | |
| Stanislawski Spring Rest | 3520 | 100 | |

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| | | | |
|--|--------|-------|--|
| COLUMBUS ROUND | | | |
| Men's Open | | | |
| Dale McCawley, Gillette, Wyo. | 735 | \$200 | |
| Omer Gifford, Las Vegas, Nev. | 730 | 100 | |
| Richard McClintock, Penngrove, Cal. | 730 | 50 | |
| Ladies' Open | | | |
| Lucille Shine, Santa Fe, N.M. | 680 | \$100 | |
| Men's Amateur | | | |
| David Hunsicker, Westlake, Cal. | 500 | | |
| Steve Itow, San Juan Bautista, Cal. | 485 | | |
| Gordon Thrash, Denver, Colo. | 465 | | |
| Ladies' Amateur | | | |
| Jane Burkheimer, Covina, Cal. | 335 | | |
| Marilyn Thrash, Denver, Colo. | 250 | | |
| Sandy Gottlieb, Long Beach, Cal. | 245 | | |
| Intermediate Boys | | | |
| Andre Nelms, Las Vegas, Nev. | 520 | | |
| Steve Stoudenmier, Oregon City, Ore. | 470 | | |
| Jim Marshall, Las Vegas, Nev. | 370 | | |
| Intermediate Girls | | | |
| Michelle Gifford, Las Vegas, Nev. | 180 | | |
| Junior Boys | | | |
| Troy Gifford, Las Vegas, Nev. | 690 | | |
| Kent Morrett, Fontana, Cal. | 630 | | |
| Richard Tahkofper, Arvada, Colo. | 460 | | |
| Junior Girls | | | |
| Sue Baxter, Klamath Falls, Ore. | 545 | | |
| Dereth Tahkofper, Arvada, Colo. | 215 | | |
| Wendy Martin, Las Vegas, Nev. | 190 | | |
| SACO SPEED ROUND | | | |
| Men's Open | | | |
| Omer Gifford, Las Vegas, Nev. | \$200 | | |
| Dale McCawley, Gillette, Wyo. | 100 | | |
| Joseph Ward, Santa Fe, N.M. | 100 | | |
| Gerald Gunderson, Salt Lake City, Utah | 50 | | |
| Rick Hardy, Albuquerque, N.M. | 50 | | |
| Ladies' Open | | | |
| Lucille Shine, Santa Fe, N.M. | \$100 | | |
| Ladies' Amateur | | | |
| Marilyn Thrash, Denver, Colo. | Trophy | | |
| Men's Amateur | | | |
| Steve Itow, San Juan Bautista, Cal. | Trophy | | |
| Len Tubb, Walnut Creek, Cal. | Trophy | | |
| Gordon Thrash, Denver, Colo. | Trophy | | |
| DIATHLON | | | |
| Men's Open | | | |
| Dale McCawley, Gillette, Wyo. | \$150 | | |
| Rick McClintock, Penngrove, Cal. | 100 | | |
| Ladies' Open | | | |
| Lucille Shine, Santa Fe, N.M. | \$ 75 | | |
| Anita Denend, El Sobrante, Cal. | 50 | | |
| Men's Amateur | | | |
| Gordon Thrash, Denver, Colo. | Trophy | | |
| Steve Itow, San Juan Bautista, Cal. | Trophy | | |
| Len Tubb, Walnut Creek, Cal. | Trophy | | |
| Ladies' Amateur | | | |
| Jane Burkheimer, Covina, Cal. | Trophy | | |
| Marilyn Thrash, Denver, Colo. | Trophy | | |
| Sandy Gottlieb, Long Beach, Cal. | Trophy | | |

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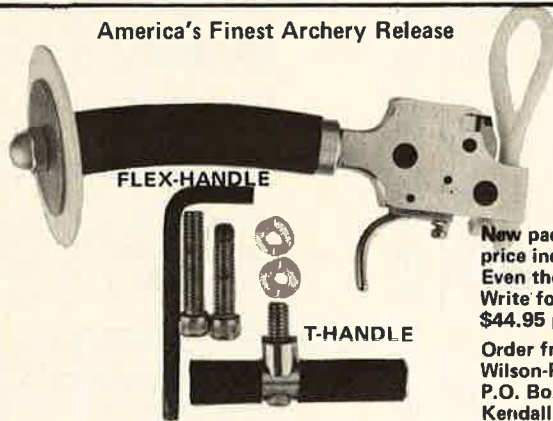
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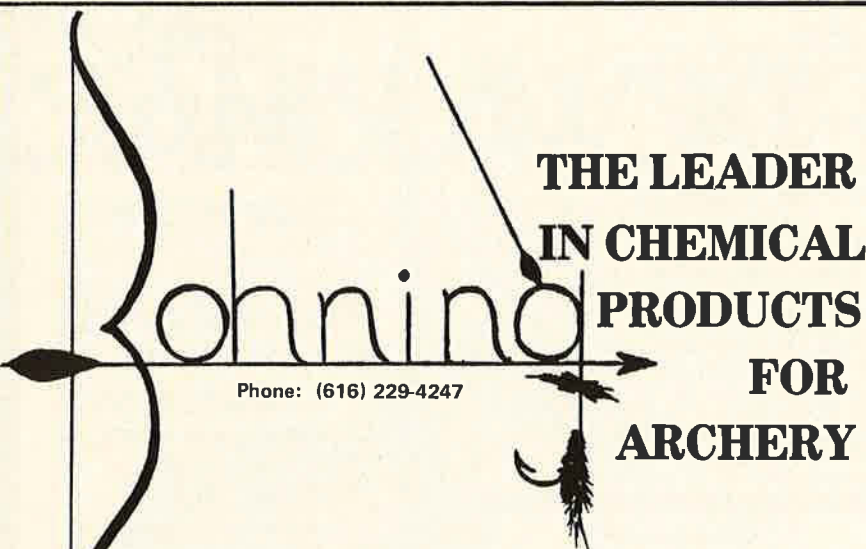


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GAR & BOWFIN (from page 41)

camouflage clothing, I stay away from bright colors when bowfishing. I have found that it is much easier to get close enough for a shot when the hunter is wearing drab clothing. A wide-brimmed hat and polarized sunglasses will cut down on glare and reflection, helping the hunter to make successful shots more often.

If a fish arrow is tied near the nock the bowfisherman could accidentally place his bow hand through the fishline hanging between the bow reel and the arrow. This could result in a serious wound on release of the arrow. To avoid this possibility I tied my fish arrow near the point when I first began bowfishing. Unfortunately, an arrow tethered at the point did not prove adequate for the demanding accuracy needed for gar pike and bowfin hunting.

To solve the problem, I developed a technique that would give the accuracy of tying near the nock and the safety of tying near the point. If not provided, a small hole is drilled at both ends of a solid fiberglass fish arrow. One end of a .033-inch diameter stainless steel leader wire (available through most fishing tackle catalogs) is fastened at the hole near the nock. The wire is then pulled taut along the arrow shaft and fastened to the hole at the point. The fishline is attached to the arrow by fastening a sturdy swivel snap to the wire. While hunting, the line is kept near the point, but when the arrow is released the line slides down the wire to the nock. Since the line provides drag at the rear of the arrow the fletching is not needed and the accuracy is better without it.

It is important that the drag of the fishline be kept directly behind the arrow if accuracy is to be maintained. I believe this is best accomplished by the "shoot through" type bow reel. The large circumference of the "shoot through" bow reel also aids in rewinding the fishline as quickly as possible.

The final component of a good bowfishing rig is the line. I recommend braided nylon line of at least 40 pounds test. Monofilament line of sufficient strength is too stiff and also stretches; it does not work well for bowfishing. Fifty feet of line on the reel is plenty. With fifty feet there is enough excess to allow the archer to remove the first several feet of line when it becomes frayed.

• Author prefers wire leader on arrow shaft with snap swivel which slides with the draw. It does not deflect arrow upon the shot.



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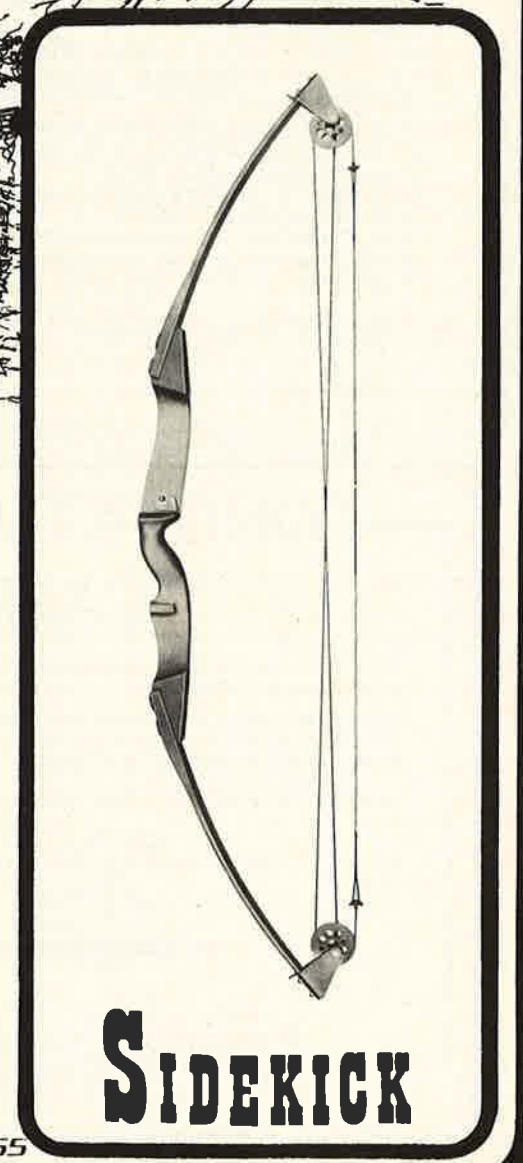
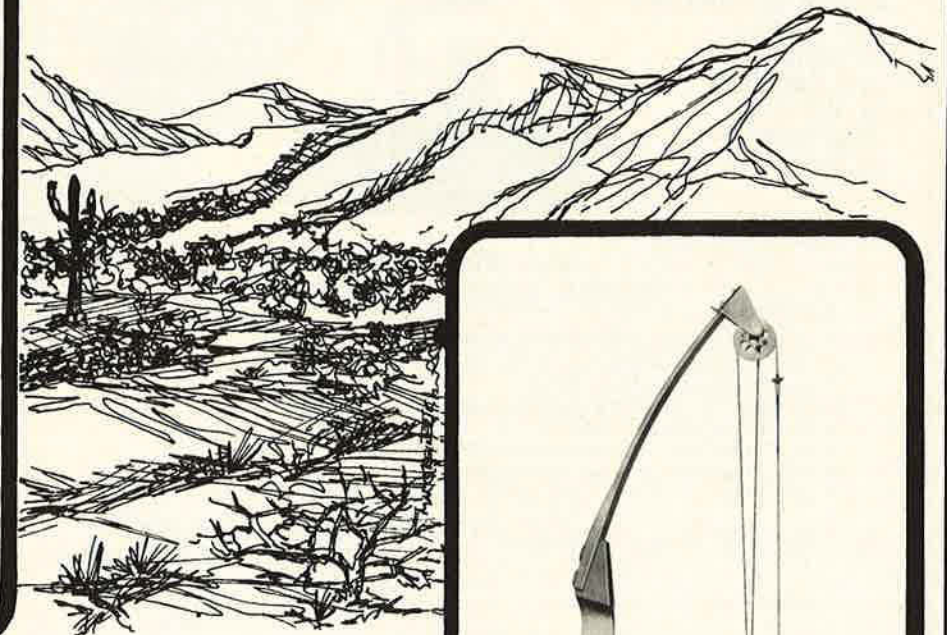
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GROUNDHOG (from page 43)

two-bladed Bear broadhead I find very satisfactory. Use at least a 50-pound recurve. I use my heaviest recurve, a 66-pound Staghorn, and my 2020 Game-Getters, No. 11 Dura-Flites or cedars. Cedars work better than 2117s and you won't mind losing them as much as you would a 2020 or a No. 11.

I hesitate using my new Wing compound because groundhogs have a tendency to jump the string and any compound, you know, is noisy. But I will investigate.

Anyway, shoot a groundhog in the chest cavity, same as you should a deer or a bear. This is simply an archery skill. If you can twenty a target skunk, say, or a target partridge or even a target groundhog at fifteen yards, then you can shoot a real groundhog in the chest cavity at fifteen yards.

But when you're going for the trophy thingamabobs, you may need some cunning and some endurance in addition to your archery skill.

It can be just like deer hunting, except in July rather than in October. I can remember about three or four summers ago in July a certain groundhog on his haunches by his den, alert for danger, but also curious as to what I am. I have a low profile because I'm down on my belly. I don't look human, I hope, because I have a camouflage net on my head which makes my head look like a rock with moss. I have green gloves on, made of wool and thick. I have a camouflage jacket on. I am wearing this outfit so as to appear inconspicuous and to frustrate as well a cloud of mosquitoes and squadrons of deer flies and horse flies out for drinks of my blood. And I am sweating in a way you would not believe.

I move my camera up slowly . . . Click! I advance the film. Click . . . Click! . . . Click!

He twitches at each click. But he doesn't dive. He's looking right at me. I'm about seven yards away and I have a 105mm lens screwed into my 35mm camera.

I put the camera down and reach for my bow, the 65-pound Tice & Watts. Do you think I can shoot my bow when I'm on my belly? Do you think I can see my bow when there is sweat dripping over my glasses?

I grope for my bow and for a 2020. It takes me several minutes to nock the 2020.

I can't shoot my bow when I'm on my belly. *But* I have a rope tied to a bush about twenty yards away. I tug at the rope. The groundhog turns to look at the bush, scooting around on his haunches some sixty degrees. He studies it intently. What shook the bush?

I get up onto my knees, raise my bow and pull back the string and the aluminum arrow. I anchor and hold.

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"Just where they'd be," I thought and watched the backwater intently. As if by magic, tails, mouths, fins and ripples began to appear. A large school of carp were feeding on the surface in the backwater. I scrambled for my bow and sunglasses and away I went.

I stood in the warm water and watched carp of every size pass before me. I was invisible to them because the sun was behind me and in their eyes. I picked out a good one and let her have it.

Later, at the archery shop, my carp weighed in at twenty pounds and was entered in the annual bowfishing contest.

Late that evening, I awoke to a terrible itching around my knees. On both knees were numerous bites. No mosquitoes, flies or ticks had bothered me, so it could only be chiggers. Judging from the location of the bites, the chiggers must have been near the surface of the water, probably in the duckweed and other water plants that cluttered about my knees as I waded in the backwater. I remembered that when I waded with long, baggy jeans I wasn't bothered, but when I wore shorts I was chigger food. The long, loose fitting pants effectively kept out the chiggers, and I made sure to wear them whenever I waded.

The next day was hot, with temperatures in the 90's and a bright sun. I soaked my T-shirt and put it on. This kept me cool and un-sunburned. I wore a hat with a visor as well, to keep the sun off my nose and cut the glare.

I waded into the backwater and waited for a shot. I felt a sudden rush of water against my leg as a large, slow-moving ripple started from under the duckweed just four feet away. First came the head, larger and wider than any I had ever dreamed of. I watched dumbfounded, as row after row of half-dollar-size scales left the weed-patch. The tail made broad sweeps as it pushed the big carp toward deep water.

At last I regained my senses and got off a shot. The arrow skimmed through the first ten inches of water and drifted the bottom.

"Damn, waited too long!" I was standing in thigh-deep water and I let the fish get ten feet away before I shot. At an angle like that an arrow will never penetrate the water more than a foot, in the same way you might skip a pebble on a lake. If the angle is less than 30 degrees don't shoot.

I saw the forty-pound-plus fish five or six times after that first shot, but she never came close again.

Glancing over to a weedy corner of the backwater, I saw two carp "finning" in the weeds. Their tails and dorsal fins

could be seen as they fed on tender bottom plants. I chose the carp that looked the largest and began to stalk her.

Once or twice in the stalk she seemed to disappear only to reappear a couple of feet away from her last location. I was ten feet away when she saw me. A large female, she tried to run right past me to deep water, but I caught her as she passed five feet away.

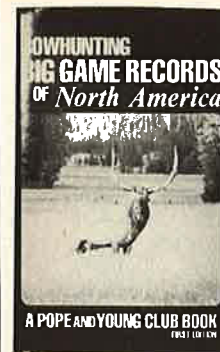
The battle that followed was tremendous. Immediately after being hit, she dove deep into the weeds and ran below them for about twenty feet. All my line was out as she surfaced twenty-five feet away. I couldn't bring her back because of the weeds and I didn't dare try to rip the line free for fear of pulling out the arrow.

I threw my bow down and moved as quickly as I could through the water, weeds and muck to the carp. I reached it in no time at all, pushed the arrow through and secured the barbs. Then I tore the line free of the weeds and brought the fish to shore.

I didn't realize how big she was until the weighing at the archery shop. She tipped the scales at just under thirty pounds; the largest carp ever taken in the contest's nineteen year history.

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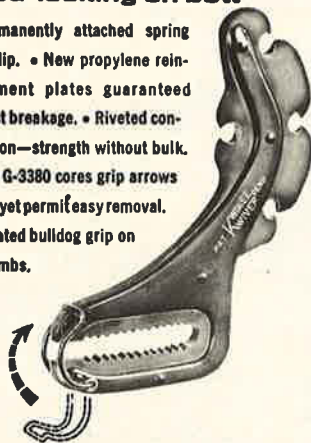
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BOW REPORT (continued from page 47)

in doing so—and the effect on the bow characteristics previously cited is quite obvious, as shown in Fig. 5 and the comparative test data.

This is because when less of the available circumference of the eccentric is used to obtain a specific draw force, the eccentric does not rotate as many degrees. This reduces the effective leverage of the eccentric, consequently it takes more force on the string to draw the bow. This results in a smaller reduction in draw force when the eccentrics turn over, hence the holding force at full draw is higher and more energy is stored.

In this instance, the 1-3/4-inch diameter eccentric stores 50.83 foot-pounds, whereas the 1-1/2-inch diameter eccentric stores 46.37 foot-pounds, but both bows have a 52-pound peak draw force. Although the bow with the larger eccentric is slightly less efficient (about two percent) because of the greater eccentric mass, the net result is an increase in arrow velocity with the use of the larger eccentric because more energy is available to apply to the arrow.

Within the limb adjustment limits, which are carefully scribed on the limbs of the Alaskan, we were able to obtain only 52 pounds peak draw force from the No. 6 limbs with the 1-3/4-inch diameter eccentric. Had we taken the trouble to measure actual limb deflection as a limiting factor, a higher peak draw force could have been achieved, but considering the conditions of factory warranty, it is not advisable to go beyond scribed limits.

Figs. 1, 2 and 3 present the force-draw curves for the 47- and 52-pound peak draw force settings for test bow No. 1, and the 60-pound peak draw force setting for test bow No. 2. The individual data for each bow and setting can be picked out of the data table.

Fig. 4 gives the performance curves for Bow No. 1 at the 47-pound peak draw force setting. Fig. 5 shows the comparison between the performance of the two test bows at identical peak draw force of 52 pounds but with the two different eccentric sizes. Fig. 6 is the performance plot for test bow No. 2 at the 60-pound peak draw force setting.

The limb design of the Alaskan permits a relatively high pre-stress or pre-bend in the limbs at brace height. This results in the crisp initial slope of the force-draw curve as shown in each of the three curves presented [Figs. 1, 2 and 3]. Energy storage capability for the bows at the various settings was good, but not outstanding, considering the extent of pre-stress in the limbs. Static hysteresis was average—the benefit of the excellent bearing design in the eccentrics is probably somewhat offset by the large cable angle over the idlers.

The values obtained for virtual mass were very consistent except for the 52-pound setting for No. 1 test bow. At 175.3 grains, this value was about 12 grains higher than the average of the other four setups tested—not a very significant variation, but enough to note. (Remember, the lower the virtual mass, the better the bow performance, all other

factors being equal.)

Cable clearance was measured for both bows using a 5/16-inch diameter aluminum shaft, nocked and resting against the theoretical centerline of the bow at the arrow plate. The distance from the shaft to the nearest cable is shown. The difference found between the two bows can be attributed to the angular setting of the mid-limb idler which varied between the bows. The bow with the greatest clearance had the largest angular offset of the idler.

GENERAL COMMENTARY

All test shots were made using the brush rest and adjustable nylon arrow plate or pressure point that is standard equipment on the Alaskan. This permitted a wide range of arrow spine and weight even beyond those shown on the performance curves. The handle is drilled and tapped 5/16-24NF to accept the externally threaded nylon pressure point as well as an optional Super Berger Button. The brush rest is standard, but several optional rests are available.

We were particularly impressed with the fine detailed mechanical design of the Alaskan compound. Designing and building a compound bow is more complex than designing and building a conventional recurve or even the more sophisticated metal handled takedown recurves that are top-of-the-line conventional bows today. Compounds require far more mechanical and structural design because of the adjustable draw weight and compounding systems. Attention to detail and the use of up-to-date engineering principles and components is a distinguishing characteristic of a fine compound. The Bear Alaskan deserves a few plaudits in this regard.

We'd note the overall performance as good—not exceptional, but better than average. While personal preference and individual criteria will vary from archer to archer and what we like may not be what turns you on, we found the Alaskan a very pleasant bow to shoot in hand, and quiet.

The two bows we tested weighed 3 pounds 11 ounces and 3 pounds 13 ounces respectively, quite light for four-wheelers.

One thing on which we must comment is the Bear Compound Bow Instruction Manual. In our opinion it is by far the best and most complete instruction book available on four-wheel compound bows. It not only covers the Alaskan and Tamerlane II in detail, but provides parallel general information for the Allen, Jennings, Carroll, Precision and Wing four-wheelers. A copy is included with the Alaskan and Tamerlane II bows, but it can be purchased separately for \$4.95. If you have questions about adjusting your four-wheeler, you'll probably find the answer in this instruction manual.



"You'd better pick a different anchor, Gramps."

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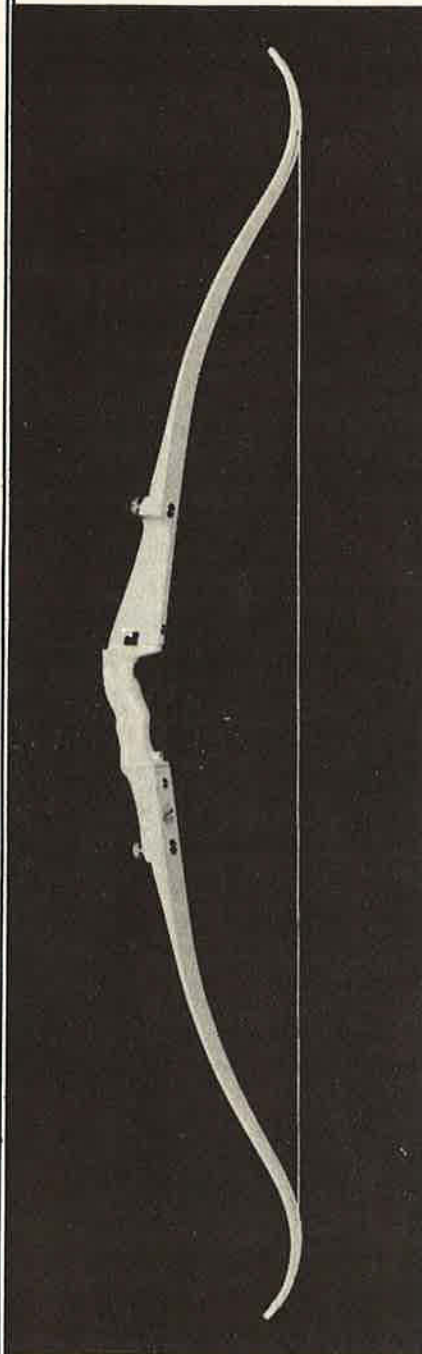
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NEW LOCATION, NAME FOR T.W.A.C.

After 38 years in Vermont's Green Mountains, Teela-Wooket Archery Camp (TWAC) has moved to Pennsylvania's Pocono Mountains and changed its name to The World Archery Center. The new facilities, which are near Marshall's Creek and Stroudsburg, have three large fields for outdoor shooting and two pavilions for indoor shooting and recreation.

TWAC archery instruction sessions this year are: June 15-25, 10-day instructor course for TWAC and NAA certificate; June 13-25, 12-day advanced international coaches course; June 13-19, six-day basic course for TWAC archery counselor and AAHPER outdoor education archery certificates; June 13-25, 12-day or less vacation plan with coaching if desired.

For full information, write to TWAC's executive directors, Mr. and Mrs. Ed B. Miller, 67 Old Stone Church Rd. AB, Upper Saddle River, N.J. 07458.



ANDERSON CATALOG AVAILABLE
The 1976 edition of Anderson Archery's free catalog features more than 700 items of every major manufacturer at Anderson discount prices. For a free copy and price list, write to Anderson Archery Corp., Dept. AW, Box 130, Grand Ledge, Mich. 48837.

COMPOUND TUNING BOOKLET
"Doctor Your Own Compound Bow," for target archers and bowhunters, has been produced to give tuning aid and information to anyone who shoots a compound. It's available for \$6.95 from the author, Emery J. Loiselle, 361 Cambridge St., Burlington, Mass. 01803.

BROADHEAD COLLECTORS TO MEET
The American Broadhead Collectors Club (ABCC) will hold their annual meeting May 8-9 at the Bowhunters' Nationals, Clinton, Indiana. Several collectors will have displays at the event.

ABCC President Bill McCrary invites all ABCC members and interested people to see the collections, meet the members and talk . . . what else . . . broadheads.

GET YOUR STATE AND REGIONAL GROUP LISTED

Each year Bear Archery lists all national archery and bowhunting organizations in their annual catalog. In 1977, they also will list all state and regional archery and bowhunting organizations, in an attempt to help those groups grow, according to Dick Lattimer, Bear Archery advertising manager.

If you are a member of such a group, send Lattimer the name and address of your organization's president and/or a copy of any publication you have received from the group. Bear Archery will then contact the officer for complete information.

Send your information to Dick Lattimer, Bear Archery, The Swamp, Rural Rt. 1, Grayling, Mich. 49738.

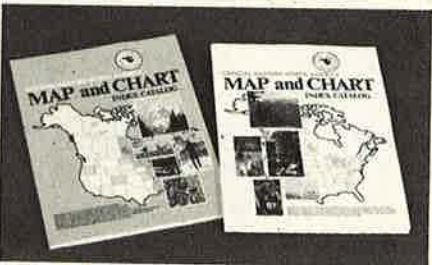
ARCHERY SCHOLARSHIP OPPORTUNITY

Colorado Northwestern Community College, Rangely, Colorado, is introducing a program of archery scholarships. The school has a two-year program. For full info, write to the Admissions Office, Colorado Northwestern Community College, Rangely, Colo. 81648.

HOW ONE ANTI-HUNTING GROUP WORKS

According to the Jan. 13, 1976, issue of *The National Enquirer*, the Animal Protection Institute collected almost \$1 million in 1974 but never spent a dime on animals. The information was provided by the California attorney general's office. Most of the money apparently went for API staff salaries and advertising.

The California State Attorney General's office is now investigating the Sacramento-based "humane organization."



TOPO MAP INDEX
More than 225,000 topographic maps and hydrographic charts published by the Canadian and U.S. governments have been indexed by the U.S./Canadian Map Service Bureau. One catalog has everything west of the Mississippi River and a line due north to Hudson Bay, and one has everything east of there.

You can get information at no cost describing the indexes in further detail by sending a stamped, self-addressed envelope to U.S./Canadian Map Service Bureau, Room 500, Midwest Distribution Center, Box 249, Neenah, Wis. 54956.

SPRINGER CARP CONTEST

Springer Archery Supply will hold their carp contest again this year. There is \$800 in price merchandise or \$400 in cash available.

Entry fee is \$1.50, which covers as many times as you want to enter. Prizes will be awarded on length of the carp only. Each entry must have a Polaroid photo of the fish layed out alongside a yardstick, or two yardsticks if you have a whopper. First prize is \$500 in archery merchandise or \$250 in cash, whichever the winner chooses. Second prize is \$250 in merchandise or \$125 in cash. Third prize is \$50 in merchandise or \$25 in cash. No person can win more than one prize.

Entry fee is open until Sept. 1; winners will be notified around Oct. 1.

For full details and entry blanks, write to Springer Archery Supply, Inc., P.O. Box 338, Romulus, Mich. 48174.

Last year's winner was J. Robert Davis, Salisbury, Maryland.

TURKEY HUNTERS PIN

If your fall turkey hunt was successful, or you think this spring's hunt may be, write to Penn's Woods about their Circle of the Gobbler. Those hunters who successfully call in and take a wild turkey can be eligible for a unique wall certificate, membership pin and arm patch. Write to Penn's Woods, Dept. AW, Delmont, Pa. 15626 for details.

HOWARD HILL FILM, POSSIBLE BOOK REPRINTS

Another rental source for Howard Hill's film "Tembo", about his African bowhunting adventures, has opened up. That's Jerry Hill at Howard Hill Productions, Rt. 3, Box 137, Ashford, Alabama 36313. Rental cost is \$40 per showing.

And if there's a great enough demand, Hill may reprint two of Howard Hill's books; "Hunting The Hard Way" and "Wild Adventure". Estimated costs would be \$15 for "Hunting the Hard Way" and \$12 for "Wild Adventure". If you're interested, write to Jerry Hill at the address given in the first paragraph. Jerry Hill is an archery trick shot and the late Howard Hill's nephew.

CONSERVATION DIRECTORY AVAILABLE

The National Wildlife Federation's 1976 CONSERVATION DIRECTORY lists about 1,500 organizations and more than 8,000 individuals concerned with natural resource use and management. It can greatly enhance your potential for

communication in the conservation/environmental field.

You can get a copy by sending \$3 to the National Wildlife Federation, 1412 16th St. NW, Washington, D.C. 20036. Be sure you specify what you're ordering. The cost includes handling and book rate postage.



KOLPIN CATALOG

Kolpin's 1976 catalog of bowhunting products features several new items, including a new line of camouflage knitwear (sweaters, caps and face masks) in green camo and brown camo patterns. They also have a 36-page gun case catalog printed in four colors. To get this material, send \$1 to Kolpin Manufacturing, Dept. AW, Berlin, Wis. 54923.

SAN DIEGO OPEN, LARGEST CASH TOURNEY EVER

The San Diego Open will be held June 2-6 at the San Diego, California, Sports Arena and will offer \$41,050 in prize money. The grand champion will receive \$10,000, and there will be \$23,100 in the following men's division and \$7,950 in the following women's division. Pre-registration fee is \$100.

May 1 is the last day the sponsors will accept registered participants. Total number of participants they can accept is 560.

The game consists of two rounds, with each round consisting of five ends. Two ends are shot at 20 yards, two at 25 yards and one at 30 yards. Each end consists of four arrows. The target is a 46-by-46 cm blue card with four separate 16cm diameter round spots, with each spot having scoring rings of 5-4-3-2 points. One arrow in each end will be shot at each target; there will be no kissouts. Perfect round is 100 points; perfect game is 200 points.

June 2 will be registration, open shooting and range familiarization. Each participant will shoot one game on June 3 and one game on June 4 to qualify 280 shooters for June 5 shooting. Each semi-finalist will return to zero score and shoot one game June 5 to qualify 80 finalists for June 6. Again, all finalists will return to zero score and on June 6 one game will be shot to decide the last 20 finalists and the lower 40 money winners. The 20 finalists (14 men and 6 women) will shoot a final game to be in aggregate with the earlier Sunday, June 6, game to decide the top positions.

For full information, write to Professional Archery Productions, 7972 Convo Court, San Diego, Cal. 92111.

5/16" BJORN NOCK PROBLEM SOLVED

If you have some 5/16-inch Bjorn nocks which don't appear to line up properly on your arrow shafts, the problem may be with the nocks and not your eyes. Early in January, Easton Aluminum recalled all Bjorn nocks of this size which had been distributed in late 1975 throughout the United States. The nocks were molded crooked.

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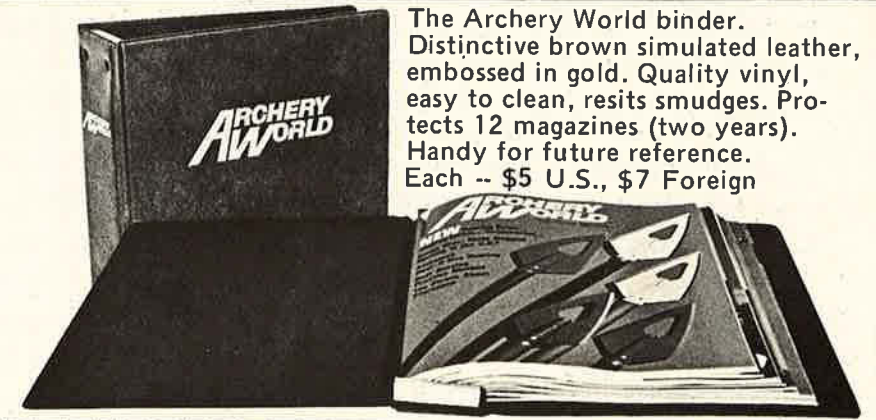
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several times and are O.K. Another half million nocks were shipped several weeks ago.

But just in case you got some of the bad batch, you may want to check your own supply and/or your arrows. If you're shooting much, you probably will already have noted and corrected the problem.

EASTON TEAM SEARCH

Easton Aluminum, Van Nuys, California, is now accepting applications for a two-man team to compete in the World Professional Team Championships, to be held in conjunction with the NFAA Nationals in Aurora, Illinois.

Anyone interested should send documentation of their scores and their archery history to Joe Johnston, Easton Aluminum, 7800 Haskell Avenue, Van Nuys, Calif. 91406. A two-person team will be chosen and their team entry fee of \$500 will be paid by Easton Aluminum. There are no restrictions as to age, sex, shooting style or equipment.

TOURNAMENTS

April 4: McDonnell Douglas Corporation Archery Club Turkey Shoot, for the

benefit of the Bowhunters Defense Fund. To be held at August A. Busch Wildlife Area, Weldon Springs, Missouri. For full info, contact Joel Hughes, 6622 Cortena Dr., Hazelwood, Missouri 63042.

June 5-6: NAA 900 and probably Easton 600 June 5, NFAA field round (NFAA rules) June 6. Ringo Springs Ranch, Black, Missouri 63625 in the heart of the Ozarks. Write to them for full info.

June 20: Catamount Bowhunters Shoot, 12 3-D targets, 10 animal, 8 broadhead. Unknown distances, natural settings. Full info available from Dennis Allman, Rt. 4, Box 111-K, Morganton, N.C. 28655.

GEORGIA ALLOWS SOME COMPOUND USE

The compound bow is now partially legal in Georgia. Its use will be allowed during the regular firearm season this coming fall, according to Game Division Chief Hubert Handy, but *not* during the special archery season prior to the firearm season.

This decision was made by the Georgia Board of Natural Resources at its last meeting.

Minimum draw weight requirement is 40 pounds.

In response to a question, Handy said there obviously still is some official objection to the compound bow in the

state, and he expects it will be a year or more before the compound reaches fully legal status in Georgia.

WOMEN'S OUTDOOR GROUP FORMED

Outdoor Women is an organization for all women without regard to their experience level in outdoor activities. The organization will provide instructional clinics and seminars, publish a newsletter of the latest developments in outdoor sports as they pertain to women, special trip packages, listings of manufacturers supplying women's outdoor clothing, plus other "how to" and "where to" info. If you're interested, write to OUTDOOR WOMEN, 500 12th St., SW, Suite 810, Washington, D.C. 20024.

KITTREDGE CATALOG

The Archer's Bible, Kittredge Bow Hut's 226-page 1976 catalog, is now available. It's jammed with hunting and target tackle of all kinds. To get a copy, send 50 cents to cover postage and handling to Kittredge Bow Hut, Dept. AW, P.O. Box 598, Mammoth Lakes, Cal. 93456.



ARCHERY OUTFITTERS CATALOG

You can get a free copy of The Archery Outfitters 82-page 1976 catalog of hunting and target supplies, mostly hunting, by writing to The Archery Outfitters, Dept. AW, 578 Stone Rd., Rochester, N.Y. 14616.



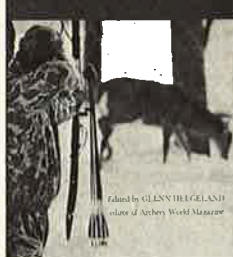
* Giant javelina? A big one certainly, but not a giant. But you can make your trophy look like a giant if you have a kid hold it up for the camera. Fishermen have known about this technique for years, and sometimes hold their catch so far in front of them you'd almost think the fish were hanging on an invisible line and the fisherman was stretching his arm to make it look like he's holding the fish. Javelina bowhunters can't go quite that far, but Larry Whiffen, Jr., Milwaukee, Wis., is 6'3", 250 pounds, and anything he holds looks small. So he asked Brian Poindexter, Des Moines, Iowa, a member of his hunting party on a January hunt in west Texas, to pose with the javelina he took. That's Brian in the left photo, Larry in the right. Guess which photo Larry shows first.

Add To Your Bowhunting Library

In this well-edited collection of articles . . . the reader will find a thorough introduction to bowhunting, as well as some first-person accounts of bowhunting adventures . . . the first chapter is devoted to hunting ethics; and a sensitivity, with few exceptions, is shown toward both humane and ecological issues. In sum, this is a fine way to either begin or add to a bowhunting collection [for the most part, general archery titles will not suffice]. A sound, basic book.

Library Journal review

Complete Guide to BOWHUNTING



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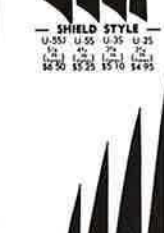
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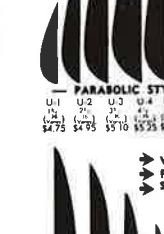
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The Slow Motion Buck



by Scott Winston

IT WAS ONE of those typically gray November days; it was also the next to last day of Wisconsin's early bow season. Black River Falls was our main base, an area I know like I know the feel of my Herter's 58-inch takedown. I had passed up more shots at does than I could count on both hands waiting for a buck.

The spot I was hunting was near a small stream that meandered through a swampy area. There was a large buck scrape behind a thicket about 20 yards from my tree stand. All season I had been thinking positively with no success, but now the buck-less routine of going and coming from my tree stand was giving me a negative attitude. Thinking I wouldn't have any luck in this stand and that there was a more comfortable one some 40 yards away, I debated switching trees. Comparing the two spots, I stayed, figuring that if deer were in rut, they would be more attracted to my present area because of its openness. It was in a circle of big pines.

At that instant, I blinked my right eye, responding to a flash or a bug on my eyelash. It turned out to be a flash from a doe. I had to decide—should I take this doe in fear of not seeing a buck? I argued with myself too long, giving the doe a chance to get out of range into some thick brush.

About fifteen minutes later I heard a deer moving through the crisp November leaves . . . a spike buck! I saw his larger left spike rise up, then his head. He was stretching to get some choice browse that still remained. Then he began to walk away from me, preventing the kind of shot I consider ideal.

Taking a chance that the buck was rutting, I challenged him. I knew I couldn't guide my arrow via magic through the dense underbrush, so I gave him a grunt similar to that of a big ol' overfed hog. The first time I made the sound from my 12-foot perch he ignored

it. I made a last struggling effort and mustered up a sound that even had emotion mixed in. He accepted the challenge or got curious and started stalking the sound. That's when it hit me—Buck Fever!

I had no control over my body. I desperately reached for a thick branch to hang onto in fear of breaking my neck. The buck went the same route as before but again didn't present a shot. He circled around me and headed toward his scrape. My eyes began to shine when I had visions of him picking up the doe's trail. He would then come within 15 yards, giving me a good chance eventually to hear the wonderful sound of my deer tag clicking on his leg.

I passed up another doe and saw a fawn . . . my buck fever peaking each time I heard a deer approach and my spirits dropping when one came into sight.

WOODS FULL OF DEER

Then hope radiated again when that spiker made his noise. I thought he was going to come right up to me and shake hands, but he stood me up and didn't show. My frustrations eased when I heard another grunt five minutes later and the woods exploded with deer. They were running in all directions, then all stopped and the woods was silent. Then they all took off again.

First came a doe, then two fawns . . . then that harsh grunting echoed and became music to my ears. The spike came toward me, following the doe's scent and grunting.

I was in an awkward position with my feet on one branch, my thighs resting against another branch and the rest of my body suspended in thin air. The buck would cross almost directly below.

At full draw, the distance from the tip of my broadhead to the closest hair on my buck's chest wasn't quite 15 feet. Grunting, with his nose to the ground, he stopped with his head and shoulders

behind a twin birch, giving me time to draw my 50-pounder back to that familiar corner of the mouth anchor. There was so much adrenalin flowing through my body that I bet I could have comfortably drawn a 90-pound bow.

I held my statue-like position seemingly forever, until he finally stepped backward and presented a decent target.

Then it happened! All time seemed as if it intended to stop . . . everything was happening in super slow motion.

My brain focused on a particularly shiny spot on the upper portion of the buck's lung area. This would be my aiming point, for my angle was almost above the buck. My left hand finally brought my bow to the spot I would aim for. This is where instinctiveness payed off. I didn't have to think; I was confident that when I released, my shaft would be sure.

My brain began sending a message to my three right-hand fingers holding the string. The message took its time traveling down my arm to my wrist and past my knuckles. The closer it got to my fingers, the slower it went. Then, as smoothly and seemingly as slowly as the flexing claws of a cat, my fingers started to uncurl and the limbs of my bow began to cast. There was no turning back now.

I thought of the new Bjorn arrow nock on my string. What if it was on crooked? My aluminum shaft slid like slow lightening across the nylon Hoyt Pro-rest, installed a few hours before when the old one broke.

The bright yellow fletching glazed past the sight window. In that instant I wondered if I would be able to mark a hit, since it was such a dark day.

The arrow finally left the bow completely and was on its own. I had a vision of a hand with two fingers crossed for good luck. My motionless follow through must have looked very impressive to the red squirrel behind me. I could almost see the blades on my three-bladed Wasp broadhead spinning as the arrow flowed like molasses toward the target.

The spinning yellow fletching began to hypnotize me as it drew nearer to success. The golden shaft went true as I watched the fletching disappear into the buck's chest just below his spine, between his ribs.

Despite the seeming slowness, my 50-pound bow cast the arrow so fast that it passed directly through the animal, exiting near the heart on the left side, and burying inches into the ground. An obvious lung shot.

As I watched him bound away, tail up, I noticed on his third leap a severe lean to the left that almost made him fall over. After silence overtook the woods, I descended that memorable tree and marked where the buck had stood with a

red hankerchief. I examined my arrow. It was totally covered with blood, had a lot of hair on it and a few trapped air bubbles.

I returned to the cabin to get some help with tracking the buck, trying to memorize the spot where I had last seen him vanish into the darkness. As I walked into the cabin I tried to display a Jim Dougherty image, but it was impossible because I was too excited.

The six of us went searching with flashlights, figuring the blood would shine in the bright lights. We began tracking, but the blood trail was hardly anything. The drops were never larger than my little fingernail and, at times, as small as a pin head and 20 yards apart. Crawling, looking, hoping, we searched for two and a half hours before deciding it would be best to wait until morning.

I walked back alone, ahead of everyone else. I kept thinking of the arrow with the air bubbles trapped in the blood, a sign of a good lung hit. I suspected we had been tracking an already-dead deer that had quickly covered a few hundred yards and died.

TOUGH TRAILING

I didn't sleep well that night and was unsure the next morning if my buck was a dream or a reality.

My father and I returned to the spot where the first blood was sighted and noticed that the buck had traveled a good 100 yards, then circled back. That's where we were confused because the blood sign had stopped completely. We started circling. One half hour later my father discovered a buck rub and spotted blood 50 yards from the last spot. On my hands and knees I followed a little heavier blood trail. The blood had come in spurts from his left side. The deer had doubled back again, further slowing our tracking.

We moved slowly 100 yards through a thick swamp but three hours later came to another stalemate. We had walked in every direction possible except for two ways. My father slapped me positively on the back and suggested we take our last chance and walk in the two remaining directions. Fifteen yards down my trail, my eyes peeling the ground in quest of blood, I asked my father if he had seen any trace of the buck. His reply was negative. Then a dramatic change in his tone of voice made my head jerk in his direction. He shouted, "Here he is!" We checked out the buck and determined he had died not too long after being hit. The lung shot worked quickly, but the poor blood trail took a lot of unraveling.

I skyrocketed to cloud nine. My first bow and arrow buck . . . the slow motion buck. If you have ever shot an arrow at a deer, you undoubtedly have had that same slow motion, dreamlike impression I experienced.

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How the Ohio Wildlife Legislative Fund Combats Anti-Hunters

HUNTERS, trappers and fishermen have increasingly felt the force of the "anti" movement. At the same time, they have witnessed a lack of organization that has shown itself most clearly in the legislatures, where the sportsmen's voice has often become less and less effective, often because they let their own minor disagreements inhibit the development of a unified voice for the big issue—the issue of freedom of choice to continue their chosen form of outdoor recreation.

Yet the individual sportsmen, and individual organizations, feel strongly and react vigorously to these threats.

In Ohio, the sportsmen are doing something constructive. They're doing it through The Wildlife Legislative Fund, an association of interests for legislative purposes. The Fund hasn't existed two complete years yet, but in Ohio a lot of people know what the Fund is and what it has done.

The Fund was instrumental in defeating a bill in the Ohio General Assembly that would have prohibited use of leg-hold traps and thus would have effectively abolished trapping in Ohio; it was instrumental in opening a season for hunting of doves; it brought suit against the State Treasurer to require that interest earned on hunting and fishing license fees, totalling half a million dollars annually that is credited to the state's general fund, be credited to uses of the Division of Wildlife for wildlife management purposes; it successfully got a bill stopped which would have created a legislative review committee to pass judgement on all new decisions made by state agencies by bypassing the governor's veto or approval power (which meant this committee could have decided whether it liked hunting and fishing regulations and seasons which are decided annually).

Jim Hanson, the Fund's legal counsel, said, "We have been successful in getting the outdoorsman's point of view accepted by the courts every time we have brought suit, and have forestalled bills detrimental to the sportsman's point of view in the legislature."

The Wildlife Legislative Fund is composed of some 250-plus sportsmen's organizations and conservation clubs, most of the Izaak Walton League clubs, many bass fishing clubs, fox hunters, raccoon hunters, etc. More than 50 bowhunting clubs are included in this total, and Hanson said, "Bowhunters have been very active in support of all issues. They're young, energetic and hard working. The same is true of bass clubs. Really, support from everywhere has been great."

In 1975, total contributions to the Fund's efforts were \$32,513.65. Of this, \$24,900.44 came from the clubs, and most of the remainder from individual contributions. There have been very few commercial contributions. Hanson said the Fund would like to see it remain that way.

The Wildlife Legislative Fund was designed to leave minor differences among sportsmen behind, and go promptly and effectively at major objectives. The Fund does not become involved in situations involving the interests of one hunting group versus the interests of another hunting group; that they leave to the respective groups to work out.

In fact, the Fund's charter specifically states that their purpose is to improve legislation concerning wildlife and related areas. It states that not less than 90 percent of the monies contributed to the Fund shall be used for legislative purposes concerning wildlife and related areas. Monies can be withdrawn and expended only in accordance with authorization made by a six-man board of trustees. The charter states: "It is anticipated that the monies in the Fund will be used primarily for retention of professional services in performing authorized legislative work."

That is how it has worked. In 1975, for instance, the Fund's

expenditures were \$20,763.37, of which \$13,943.46 were paid to Hanson as legal counsel, on an hourly basis for his handling of court cases, legislative research, attending specified related conferences. Hanson made no legislative appearances. That is the responsibility of Jim Glass, the Fund's legislative representative.

The board of trustees of this association is not elected, and no organization's contribution gives it voting power. The organizers of the Fund felt it had to be this way so the Fund could act quickly and effectively for all sportsmen.

Basically, a handful of people got together and thought about who could and would make good trustees, representing all areas of the state, but no particular organizations. These people then simply met and created The Wildlife Legislative Fund. A contributor doesn't get to vote. If a contributor doesn't like what the Fund is doing, he is free to stop contributing to it.

However, the charter does have this provision: "In authorizing actions, the trustees shall to the best of their ability attempt to reflect the desires of the organizations and individuals who are current contributors to The Wildlife Legislative Fund. If they find that any substantial number of contributors do not endorse the action proposed to be taken, they shall not authorize the action, except where the action is so vital that it is necessary to risk alienation of those contributors who do not endorse the action."

"In making decisions concerning legislation, no trustee shall act as a representative of any organization or special interest, but shall simply attempt to ascertain the consensus of contributors. If a trustee is in doubt as to this consensus, he shall withhold action."

Hanson and Glass point out that to be effective, the Fund must not only represent the consensus of interests of Ohio sportsmen, the Fund must also physically appear to do so—a prime requisite for legislative effectiveness. To aid this, the drafters of the charter included a provision that the trustees may require that any contribution be returned to the contributor when the trustees feel that it is not in the best interests of the other contributors to the Fund that such contribution be retained. The Fund cannot be "bought," and it is not even to appear to be bought.

The Fund's representatives apparently have developed good working relationships with the Ohio legislature and with Ohio sportsmen, if their success on issues and financial support from Ohio sportsmen can be criteria. Hanson said, "But we still have a long way to go. There are 800 to 1,000 sportsmen's clubs in the state, and we'd like to gain the support of them all."

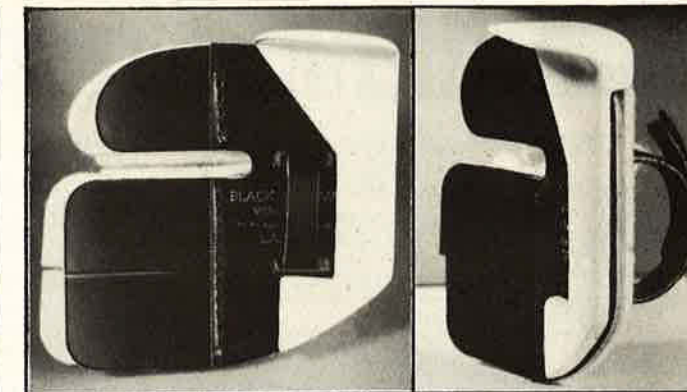
"As more sportsmen realize we are a benign agency which has done, and is doing, something on their behalf, the word should spread. It will take continued close consultation with sportsmen all over the state, continued good working relationships with state wildlife personnel and a lot of continued hard work with the legislature. We will not get into support of candidates."

"The Fund's success is based on a practical matter: If it is effective, it will gain the trust and unselfish support of all sportsmen."

"The future is extremely promising. We don't know what problems will come up, if any. But at the moment, the situation is very healthy. There are good people in the state wildlife division, we have good leadership in sportsmen's clubs. Sure, there are nagging doubts that the larger the organization becomes, the more likely it will be that it will be attacked. But on the basis of last year's track record, the Ohio Wildlife Legislative Fund has to feel confident," Hanson concluded.

Why has the Wildlife Legislative Fund been in court so much, if its primary purpose is legislative? Because the issues they have been in court on have been, and will be, before the legislature, and the legal actions are an integral part of a continuing "discussion" of the rights and interests of sportsmen.

If you're interested in learning more details about the functioning of this association, write to The Wildlife Legislative Fund, 50 W. Broad St., Columbus, Ohio 43215.



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the pros



KLEMAN, BUTZ WIN FLEETWAY
John Kleman, Latrobe, Pennsylvania, walked away with the men's crown at the Fleetway Open in Cleveland in January. He fired rounds of 299 and 298 to win \$1,000 in the Fleetway Open and \$1,500 in the PAA Championship. He also won the use of a new car for a year given by Duke Tookman of Fleetway System. Kleman was steady throughout the event, capturing the lead in the third end of the second day and holding on throughout the tournament.

Art Robinson of Garden Grove, California, appeared in great form during the first day and ended the round with a perfect 300. The second day was a little different and Robinson scored a 295 which was good for second place money in both events. Also tied for second were PAA apprentice Richard White, Muncie, Ind., Greg Schumaker, Barberton, Ohio, and Olympic gold medal winner John Williams, Rialto, California.

For the women, six-time PAA outdoor champion Ann Butz, Corning, New York, added the indoor title to her list of accomplishments as well as \$600 for the Fleetway Open and \$1,000 for the PAA Open. Plus Bear Archery had a \$1,000 check for anyone who won the tournament shooting their equipment and Ann was doing just that.

Second for the women was Denise Libby, Carmichael, California, who had led the tournament after the first day with a 293 but fell to a 286 on Sunday to end with a 579 and \$900. Third was tied at 578 by three strong Indiana competitors, Judi Webber, Jody Holder and Betty McKinney.

While the pros were shooting for the cash two young Olympic hopefuls stole the limelight by shooting 599's with one perfect each. World champion Darrell Pace, Cincinnati, Ohio and Rod Baston, Greentown, Ohio, ended in a tie which was decided in the first end of a shoot-off with Rod Baston the winner. For the amateur women Kathy Grondin captured the title with a 277 and 274 for a 551 aggregate. Second was tied between Martha Bonomini and Diane Hoffarth with 540.

Duke Tookman of Fleetway System is already working on next year's tournament which promises to be bigger and better and is presently scheduled to be held in March in Las Vegas.

WRITE ON (continued from page 11)

person's point of view. Dismissal and reprisal should only be used as a last resort.

I am proud of being an archer and love the sport. We should show the other sports that archery is truly anyone's sport, and not just for those who are deemed desirable.

Thomas Rauber
Brockport, N.Y.

I am writing you in response to the "grossly uncalled for" article entitled: "Growing Pains of Competitive Archery."

It is my personal feeling that you were greatly out of line in printing that article . . . You had no right . . . to publicly degrade Miss Pszczola. The entire issue was a personal matter with her team and the former archers involved . . .

Yes, we do have a right to keep our sport clean . . . and to protect our archers. Thanks but no thanks for some lousy publicity.

Janis Isenberger
Coach, Cypress College
Cypress, Cal.

When reading of the unbelievable happenings at San Bernardino Valley College, it is some comfort that *Archery World* should take the trouble to research and print its findings, clearly in the belief that something is wrong.

This saga without beginning or end looks mostly like a bad case of professional jealousy coupled with some misplaced authority.

Those . . . who rise to head committees of national bodies have only done what they chose to do. It seems unlikely that those who are young to the sport will wish to follow them, after such provocative and vindictive actions by officials who should have known better. Great must be the disillusion.

Ray Roberts
Oxford, England

• *The National Archery Association Board of Governor's decision on this matter is given on page 48, the NAA news section.*

AN ACCOMPLISHMENT OF PRIDE

A local anti-hunter commented in print that hunters go hunting simply to get their picture in the paper and view themselves as some sort of hero. He drew this response in the newspaper from Larry Elam of Chattanooga. It inspired me, so I pass it on:

"The hero view is absurd. Competitive athletes, whose pictures appear daily in the newspaper with their trophies, medals or ribbons are proud of their accomplishments and justifiably so. Therefore, what is wrong with a hunter being proud of his good fortune? I have taken several deer and . . . like other sportsmen who have experienced the same feeling, I got a sense of deep, personal satisfaction, not one of boastful bravado. All true sportsmen realize that the kill is only a climax to a hunt; the real value is found in the wholesome experience of being in the great outdoors, enjoying the sights and beauty of nature, and sharing the evening campfires with good companions.

"I feel certain that most anti-hunters have no scruples when it comes to eating a steak or piece of fried chicken. These unfortunate, misinformed do-gooders give little thought to the fact that livestock and poultry are slaughtered daily by the thousands in our country. These animals don't have a chance—quite different from a deer, whose senses of smell, hearing and eyesight are all far superior to a human's, so much so that hunting them is one of the most challenging sports in America."

David Williams
Chattanooga, Tenn.

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S & S COMPOUND BOW CASE



The Guardian compound bow case is

made from one-quarter inch and one-half inch plywood covered with ox-blood colored naugahyde. It's completely lined with one-inch egg crate foam. Two separate compartments for accessories, plus arrow rack for 24 arrows. Sight shooter can leave sight on bow safely. Comes in one-bow or two-bow sizes. Full info from S & S Hobby Products, Dept. AW, 525 S. Cloverdale Blvd., Cloverdale, Ca. 95425.

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Ultra will have a full line of stainless steel shafts beginning April 1. Outside diameter will be less than for other similarly-spined shafts, tensile strength higher than others. Ultra also has a new series of low profile plastic vanes, called the Ultra Custom, for compound bow shooting. Purpose is to give more control. For a stainless steel arrow spine chart and info about the new vanes, write to Ultra Products, Dept. AW, Box 11, Fairfield, Ill. 62837.

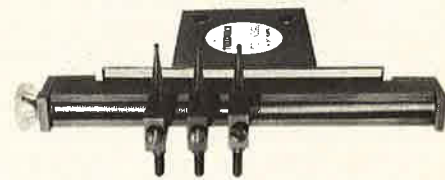
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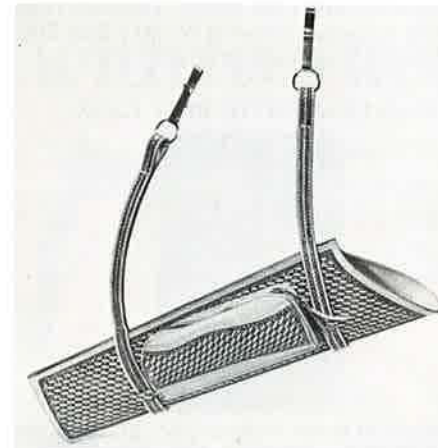
TOXONICS HUNTING SIGHT



Toxonics HS 560-D hunting sight is a precision tooled instrument with a vertical micro-adjustment feature. Allows for weather and equipment changes instantly. Other features are separate windage (horizontal) and elevation (vertical) adjustment on each pin, operated individually. Precision tooled sight blocks allow sight pin settings to within one-quarter inch for more accurate reading, good use on compound bows. Finely ground sighting balls, less than .045 inch diameter, do not obscure target even at long distances. Hole pattern fits all standard side mountings, steel side mounting for maximum strength, adapts to left or right hand, all

parts weather resistant, factory assembled to assure precision craftsmanship. Additional sighting units available. Full info available from Toxonics, Inc., Dept. AW, P.O. Box 1303, St. Charles, Mo. 63301.

TARGET QUIVER



Made from 10-ounce saddle leather, handmade basket weave and floral design in two colors (natural and original western russet). Matching color and design belts available. Designed to hold quiver in correct position, the special cut model features double stitched loops and large zippered accessory pocket, plus special pocket for glasses, dual clip-on straps and wide mouth for easy arrow removal. Full info from Quality Leathercraft Co., Dept. AW, 2935 1/2 Honolulu Ave., La Crescenta, Ca. 91214.

HUNTER'S INTERNATIONAL CORRECTION

The Hunter's International Mfg. Corp. arrow shafts introduced in the previous issue are made of stainless steel, not just plain steel, as was incorrectly stated. Full info is available from Hunter's International Mfg. Corp., Dept. AW, 2910 Harvard, Berkley, Mich. 48072.

REYNOLDS SIGHTS

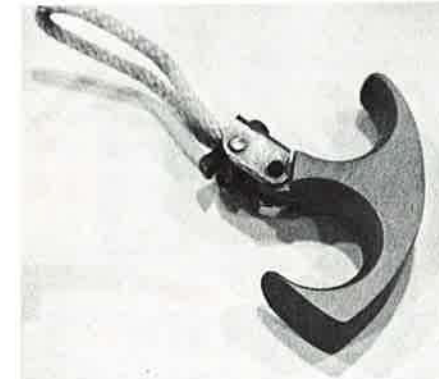


Slide blocks on the Reynolds hunting sight have been reduced in dimensional

configuration to let you place sight pins closer together, a feature quite desirable on compound bows with their flatter trajectory. Locking of anodized aluminum slides has been changed to a more positive lock without affecting the patented double-adjustment feature. Screws on target and hunting sights are solid gun blued machined brass for assured dependability.

Delrin slide on target sight is being replaced with a solid extruded aluminum slide which will accept all 8-32 sight apertures, reticles, bubble levels, etc. It will also accept standard wire apertures and prisms. Improved positive locking feature prevents slide from vibrating loose and is adjustable for different yardages. Full info from Reynolds Precision Products, Inc., Dept. AW, 27 Pierce Ave., West Carrollton, Ohio 45449.

STANISLAWSKI-II ADJUSTABLE RELEASE



Squeeze action with finger or back tension will release the Stanislawski-II adjustable rope release. Pivot action allows for movement of only the frame. Forward unit holds smooth, even further reduces string oscillation. Anodized aluminum and hardened steel body. Full info from Mel Stanislawski, Dept. AW, 7135 S.E. Cora St., Portland, Ore. 97206.

ZODIAC SAGITTARIUS



The Sagittarius three-piece takedown target bow features a 2 1/2-inch over-draw, full sight window cut 1/4-inch past center. Limbs are 90 percent working. Tested speeds of 185 feet per second using 1814 arrows weighing 335 grains, 27 inches long, shot from 68-inch bow with 34.5-pound draw weight at 28 inches. Available in 64-66-68 inches, 26 to 45 pounds, 8 1/2- to 9-inch brace height, several color choices, mass weight of four pounds, right or left hand. Comes with string mono center serving, Hoyt Super Pro rest, Berger Button Deluxe, drilled and tapped for stabilizer, Chek-It type sight. Suggested

NFAAA

I desire a Bowhunter Membership in the National Field Archery Association for the purpose of:

- automatically contributing to the NFAA defense fund
- become eligible for all NFAA bowhunter awards
- receive 12 issues of archery magazine

I understand that the membership fee is \$5.00 per year with \$2.00 being deposited to the NFAA Bowhunter Defense Fund, and that additional family memberships are \$2.00 each with \$1.00 going to the Defense Fund.

Name

Address

City/state/zip

No. of additional family members.

Mail with check to: National Field Archery Association
Route 2, Box 514
Redlands, CA 92373



30" diameter
20-25 lb.
Complete with carrying handle.

Three-year-old Calvin Montgomery, Jr. pulls four arrows out of a CALMONT. The arrows were shot in the target by a 70-lb. compound bow at 20 feet.

"The finest and most practical archery target ever developed, especially designed for hard shooting bows like the compound. Also great for light target bows and recurves."

The CALMONT is a total new concept in arrow stopping power. Due to the unique compression characteristic of the light cotton fiber (inside the CALMONT) which wads up ahead of an arrow point, the arrow penetrates only 6 to 12 inches. Thus, it is virtually impossible to shoot through a CALMONT. Sharp field points or target points do hardly any damage to the extra heavy double burlap covers, because the strands spread apart to let the arrow enter. Arrows are effortless to remove from the target.

See your local CALMONT dealer, and try one out. You may order direct. Prices below include UPS shipping to your destination. Phone (601) 265-5437 for C.O.D. shipment.

Call for information on the new larger square targets. Perfect for club and indoor use. CALMONT Archery Target \$34.95
Quality Birch Tripod \$ 9.95
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"The last target you'll ever have to buy."

THE ORIGINAL

CALMONT COMPOUND Archery Target



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BAKER

THE TREE STAND PEOPLE



Mighty-Mite Tree Stand
Comes in economic kit form for home assembly. So lightweight you can hardly feel it on your feet when you climb. 7 lbs. Tested to 375 lbs. \$24.95



Hand Climber
Eliminates hugging the tree. Easier, faster, safer and quieter. Can also be used with the Deluxe Baker Tree Stand. (Shown with Mighty-Mite) \$15.95



The Deluxe Baker Tree Stand
Continues to be the most popular portable tree stand. It is the only patented one that will actually CLIMB a tree and offer a firm, secure platform to sit or stand on. (Shown with Hand Climber) \$49.95



Strap Assembly
For back-packing the Baker Tree Stand and Hand Climber. It snaps onto the frame with no tools needed. \$3.95



Baker Game Gambrel
Provides a rack for field dressing and skinning your game. It is made of rustproof aluminum and weighs 9 oz. Tested to 380 lbs. \$6.95

Baker Wire Sports Saw
Can be carried in your shirt pocket. It will cut off a limb or a deer's feet with ease. \$2.35

Baker Safety Belt
Holds you securely with one loop around hunter and one around tree. \$8.95

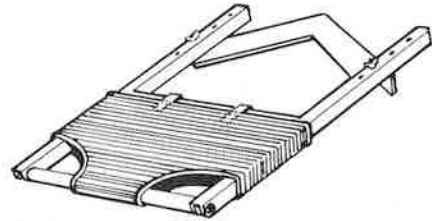
Mr. Dealer, you want the Baker Tree Stand in stock as it is the best and safest way to get up a tree. Place your order with your jobber for early and sure delivery.
Mr. Jobber, be sure you have a supply of Baker Tree Stands available for your dealers.

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on the market

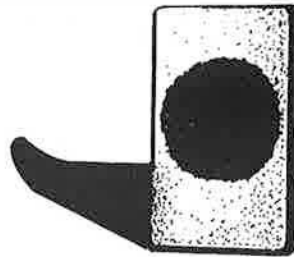
retail \$189.95. Full info from Zodiac Archery, Dept. AW, P.O. Box 1887, Gadsden, Ala. 35902.

BAKER TREE STAND AID



The Baker Add-On Canvas Seat gives the Baker Hand Climber dual purpose by providing a comfortable seat. Buckles on with ample room for hands when climbing. Seat pouch varies as you adjust straps. Level the hand climber by adjusting one side of upper blade as tight on tree as possible; makes canvas seat more comfortable. Seat canvas and buckles weigh seven ounces. Full info from Baker Mfg. Co., Dept. AW, P.O. Box 1003, 428 N. St. Augustine Rd., Valdosta, Ga. 31601.

"SUPERHUNTER" ARROW REST



This is a plastic finger-type rest, made in one piece for strength, with the finger-type rest to be sensitive enough for shooting hunting arrows with vanes. There's a fur pad on the arrow plate, and a cushion plunger can be positioned directly above the rest. Pressure sensitive backing glues rest to sight window firmly. Developed by Nick Gray and Max Greiner, Jr., they say you can get extra silence by gluing moleskin on the finger rest and the point of the plunger. In right and left hand. Suggested retail is \$2. Dealer, manufacturer and jobber inquiries are invited. Full info available from Jim Anderson, National Archery Supply, Dept. AW, 628 South 5th St., Salina, Kansas 67401.

T & A BOW DULL CO2 PACKAGING



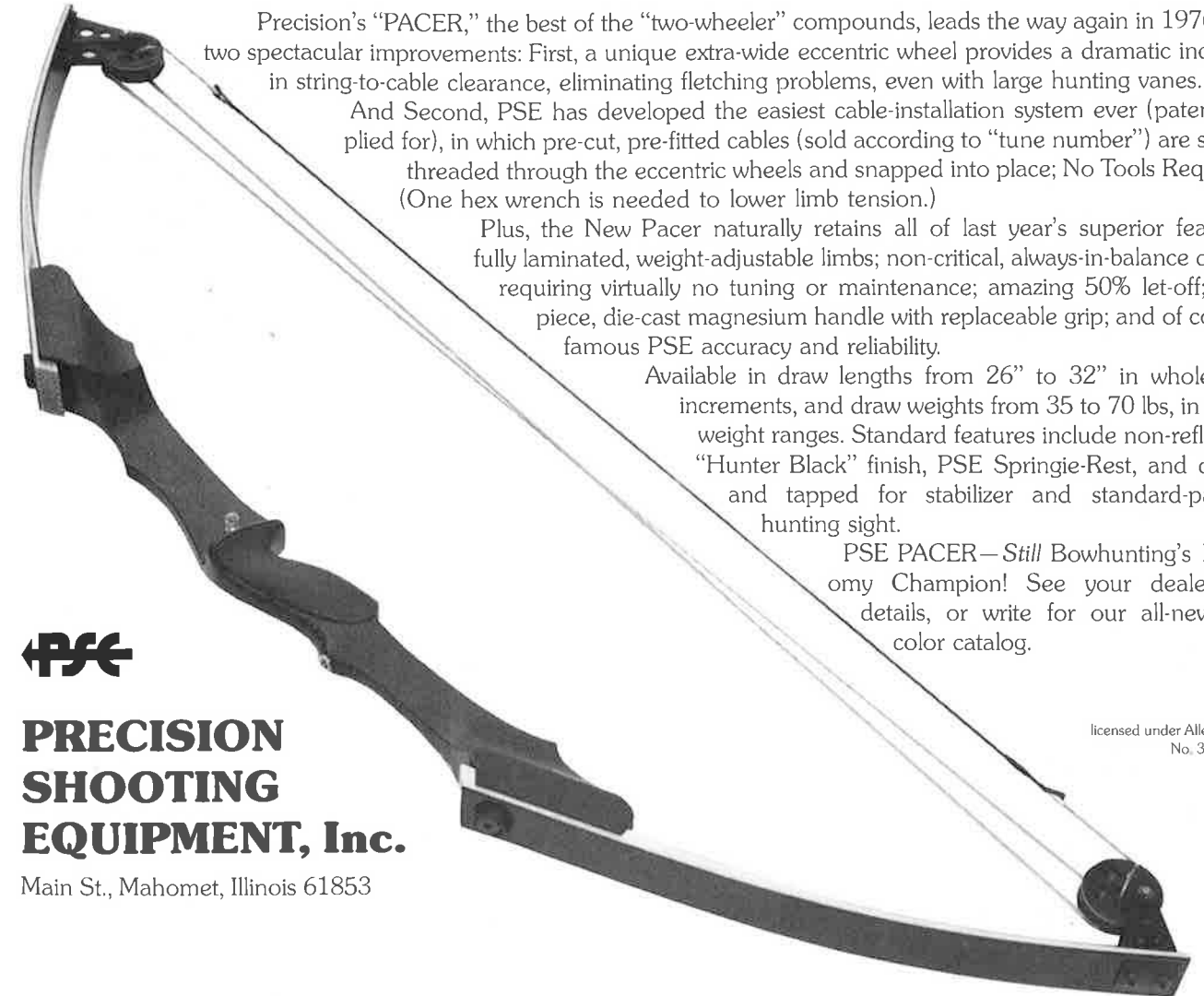
Cans of Bow Dull camouflage spray are now pressurized with CO2 instead of freon. Weighs one-half ounce less, yet contains more spray paint because CO2 takes up less space. Also is ecologically safe. CO2 is a faster propellant, causes more paint to be released more quickly. Available in Forest, Olive, Earth, Shadows and Leaf colors. Full info from T & A Center, Dept. AW, P.O. Box 709, Arvada, Colorado 80001.

BEAR COMPOUND BOW CASE



Made of green high-impact plastic, case is 56 inches wide and six inches deep. Has a carrying handle and three locks. Top half carries 24 arrows plus stabilizer. Lower portion stores accessories. Also has enclosed box for wrenches, glue, field repair items, etc. Bear also has a new take-down bow case, 38 inches long, 16 inches wide and six inches deep. Full info available from Bear Archery, Dept. AW, Grayling, Mich. 49738.

PSE PACER: STILL LEADING THE WAY with two impressive new improvements!



Precision's "PACER," the best of the "two-wheeler" compounds, leads the way again in 1976 with two spectacular improvements: First, a unique extra-wide eccentric wheel provides a dramatic increase in string-to-cable clearance, eliminating fletching problems, even with large hunting vanes.

And Second, PSE has developed the easiest cable-installation system ever (patent applied for), in which pre-cut, pre-fitted cables (sold according to "tune number") are simply threaded through the eccentric wheels and snapped into place; No Tools Required! (One hex wrench is needed to lower limb tension.)

Plus, the New Pacer naturally retains all of last year's superior features: fully laminated, weight-adjustable limbs; non-critical, always-in-balance design requiring virtually no tuning or maintenance; amazing 50% let-off; one-piece, die-cast magnesium handle with replaceable grip; and of course, famous PSE accuracy and reliability.

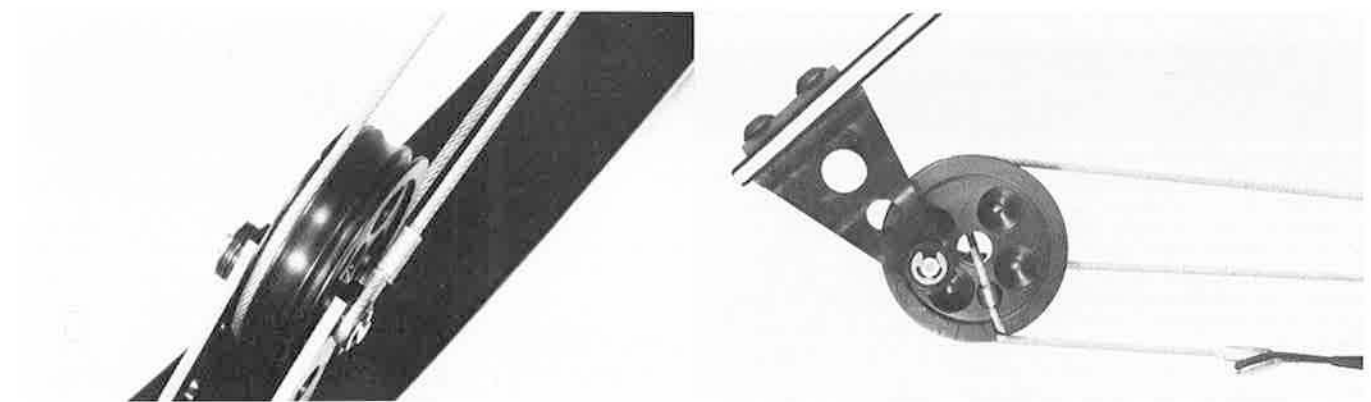
Available in draw lengths from 26" to 32" in whole-inch increments, and draw weights from 35 to 70 lbs, in 10 lb. weight ranges. Standard features include non-reflective "Hunter Black" finish, PSE Springie-Rest, and drilled and tapped for stabilizer and standard-pattern hunting sight.

PSE PACER—Still Bowhunting's Economy Champion! See your dealer for details, or write for our all-new '76 color catalog.

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PSE PRECISION SHOOTING EQUIPMENT, Inc.

Main St., Mahomet, Illinois 61853



unique extra-wide eccentric wheel provides more string-to-cable clearance; eliminates fletching problems.

simplest cable fixture ever; quick/easy, requires No Tools to change cables (patent applied for).

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W/BEAR 4 BLADE RAZORHEAD BROADHEADS

\$25⁹⁵ *ANODIZED OLIVE DRAB
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- SWITCH-A-POINT SYSTEM OR STANDARD B.H.A.'S
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ABOVE ARROWS
WITHOUT BROADHEADS \$18⁹⁵ DOZ.
Includes Switch-A-Point inserts or Standard B.H.A.

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- Cut to length w/S.A.P. or B.H.A.'s installed \$13⁹⁵ doz.
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EASTON SWIFT ALUMINUM TARGET ARROWS
\$16⁹⁵ DOZEN COMPLETE

- Available in sizes: 1416, 1516, 1616, 1716, 1816, 1916, 2016
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NOTE: Please specify bow weight or shaft size and length you want your arrows to be.

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Flanged unit clamps on string, guides nock and string peep into perfect alignment at rest and full draw for accurate shooting. Quick alignment, ideal for hunters too.

R-10, single collar, for all release shooters. Double collar models (three sizes) best for over-and-under finger shooters.

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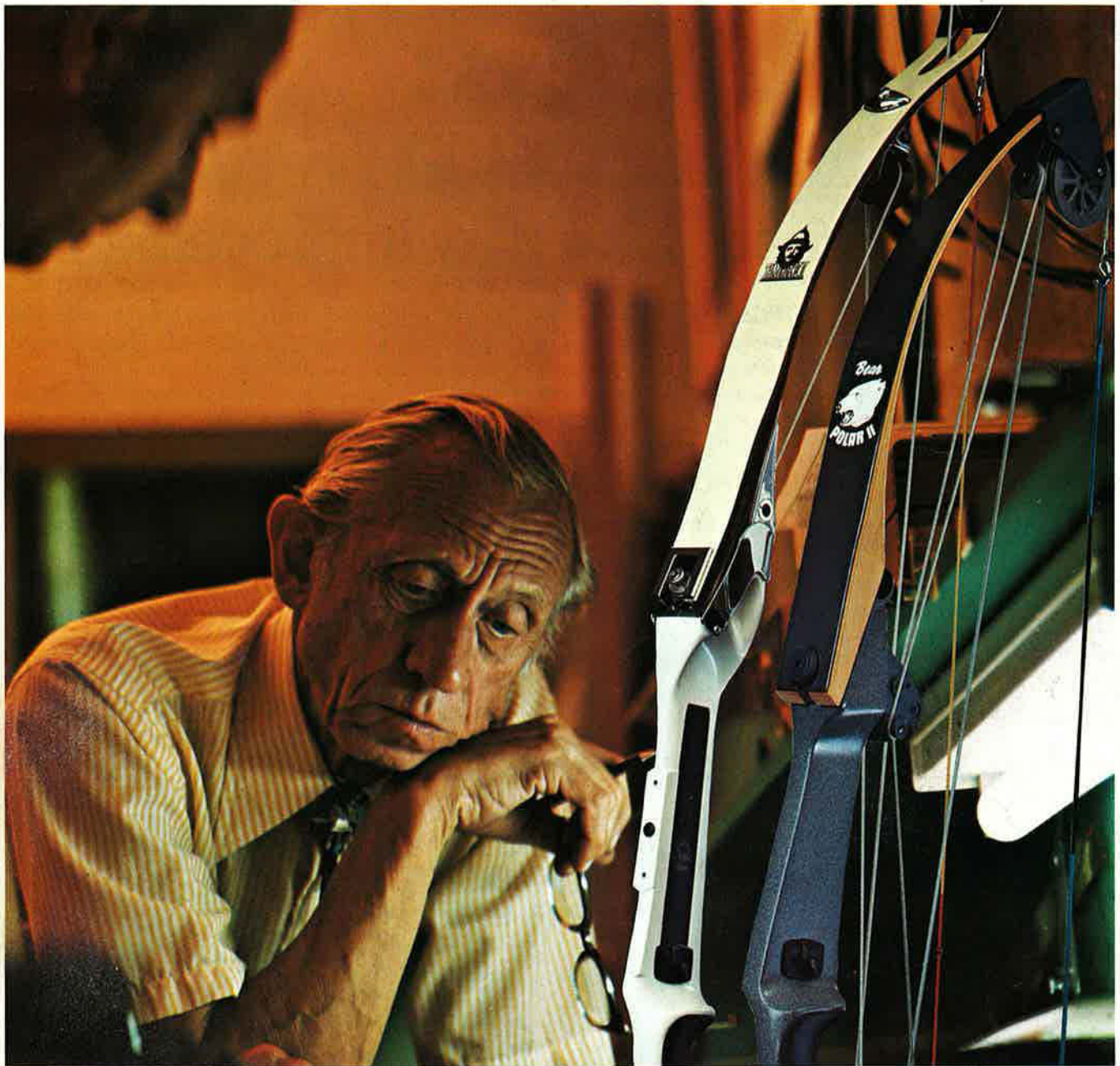
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This model features dual clips or loops easily attachable to any belt. (Matching color and design belt available for only \$10.00. Specify size when ordering.)

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